



**DIAGNOSTIC MEDICAL SONOGRAPHY PROGRAM
TECHNICAL STANDARDS / MEMORANDUM OF UNDERSTANDING**

Student Last Name (Print)	First Name	Middle Initial
Date	LOLA#	

The following technical standards and essential functions outline reasonable expectations of a student in the Sonography Program for the performance of common sonographic imaging functions. The sonography student must be able to apply the knowledge and skills necessary to function in a variety of classroom, lab, and/or clinical situations while providing the essential competencies of sonographic imaging. These requirements apply for the purpose of admission and continuation in the program.

DIRECTIONS: Please print and INITIAL each statement in the appropriate box acknowledging that you have read, understand and agree/not agree to each standard. This must be submitted with the Application.

Performance Responsibilities and Essential Functions

<i>The Sonographer / Student should be able to:</i>	<i>Student can perform</i>	
	YES	NO
Examine ultrasound exam requisitions to verify the accuracy and completeness of information.		
Upon request for when appropriate, retrieve radiographic and ultrasonic patient images and records.		
Select appropriate instrumentation for each type of exam and select appropriate instrumentation changes necessary to adjust to patient variables.		
Exercise good judgment when performing ultrasound procedures.		
Recognize emergent patient conditions and respond accordingly.		
Follow scan protocols that are required by each physician who interprets ultrasound exams.		
Make accurate measurements from ultrasound images and utilize computer program to calculate additional data from measurements.		
Recognize safety hazards.		
Recognize and report any change in the performance of ultrasound or other equipment used to perform an ultrasound exam.		
Perform periodic quality assurance tests on the ultrasound instrumentation and maintain records of the tests.		
Maintain order and cleanliness of equipment and ultrasound exam area.		
Provide information about diagnostic ultrasound to patients, their relatives and staff.		

ADMINISTRATIVE AND RECORD KEEPING

<i>The Sonographer / Student should be able to:</i>	<i>Student can perform</i>	
	YES	NO
Schedule patient exams and procedures.		
Maintain all necessary departmental and hospital records (may require use of computer systems).		
Maintain an adequate inventory of necessary supplies.		
Maintain records of all equipment quality assurance tests.		

OBSERVATION STANDARD

Ability to participate actively in all demonstrations, laboratory exercise, and clinical experiences in the professional program component and to assess and comprehend the condition of all clients assigned to him/her for examination, diagnosis and treatment. Such observation and information usually require functional use of visual, auditory, and somatic sensations.	<i>Student can perform</i>	
	YES	NO
<i>The Sonographer / Student should be able to:</i>		
Distinguish gray scale and color distinctions on live, simulated, and recorded images while simultaneously viewing the ultrasound control panel in low light settings required for sonographic imaging.		
Recognize normal and pathologic sonographic characteristics of organs, tissues, and blood flow.		
Observe sonographers demonstrating scanning skills and patient manipulations.		
Observe patients both near and far in an environment with limited lighting.		
Recognize, interpret and respond to facial expressions and body language.		
Monitor patient physical and mental status during the scan.		
Recognize and respond to soft voices or voices under protective garb.		
Distinguish audible sounds from both the patient and the ultrasound unit.		
Adequately view sonograms, have the ability to perceive small details as well as discriminate subtle differences.		

COMMUNICATION SKILLS STANDARD

Ability to interact and communicate effectively in English using verbal, non-verbal and written formats with faculty, other students, clients, families and all members of the healthcare team. (including telephone). <i>The Sonographer / Student should be able to:</i>	<i>Student can perform</i>	
	YES	NO
Elicits and transmits information to patients, staff, fellow students, instructors, and other members of the healthcare team.		
Comprehend and interpret verbal and written communication in both the academic and clinical settings.		
Obtain relevant patient clinical information, responds to questions, interpret physician's orders and communicates sonographic findings to interpreting physician in both verbal and written formats.		
Instruct patients prior to, during, and after ultrasound exams in order to relieve patient anxiety, maintain patient cooperation, achieve proper patient positioning, and insure that patient comfort is maintained as much as possible.		
Demonstrate sensitivity towards individuals from diverse backgrounds.		
Hear and communicate instructions and explanations to patients in a manner displaying compassion and empathy.		
Recognize and respond to an urgent or emergency situations.		

EQUIPMENT

Instrumentation that the sonographer uses includes (but it not limited to) the following: <i>Students should be able to demonstrate and operate:</i>	<i>Student can perform</i>	
	YES	NO
<ul style="list-style-type: none"> ▪ Various stationary and portable ultrasound instruments including: <ul style="list-style-type: none"> ▪ M-mode ▪ B-Mode ▪ Doppler ▪ Transabdominal Transducers ▪ Endovaginal Transducers ▪ Endorectal Transducers 		
▪ Computers		
▪ PACs Systems (Picture Archiving and Communication Systems)		
▪ Digital storage devices		
▪ Video recorders / printers		
▪ QA phantoms		

MOTOR SKILLS STANDARD

Sufficient motor ability to execute the movement and skills required for safe and effective and emergency treatment. <i>Sonographer's duties and work environment requires that they:</i>	<i>Student can perform</i>	
	YES	NO
Static and dynamic strength enough to lift some patients, move heavy equipment on wheels (up to approximately 500 lbs), and patients in wheelchairs and stretchers.		
The ability to exert muscle force repeatedly and continuously over time (including walking, standing or being upright continuously for 8-12 hours).		
Be able to lift 50 lbs routinely without assistance.		
Ensures proper and safe patient positioning, movement of the ultrasound unit and other equipment in all settings.		
Stamina and trunk strength to push and pull, bend and stoop and reach overhead.		
Dynamic and trunk strength to perform sonographic exams while sitting or standing.		
Full use of hands, wrists and shoulders (arm-hand steadiness, control precision, dynamic flexibility, extent flexibility, finger dexterity, quickly move arms). Ability to maintain adequate probe pressure (exert up to 40 lbs of continuous pressure) necessary to acquire ultrasound images.		
Maintain prolonged arm positions needed for scanning (stamina, arm-hand steadiness).		
Demonstrate manual dexterity and fine motor movements to manipulate the ultrasound transducer and control panel simultaneously while achieving the diagnostic objective of the scan/examination (control precision, dynamic flexibility, extent flexibility, finger dexterity, and multi-limb coordination).		
Rapidly respond to emergency signals and alarms.		
View ultrasound monitors for hours at a time.		
Lift and assist patients (with assistance) onto and off exam surfaces.		
Perform ultrasound exams in a sterile environment (when required).		
Move independently about the department, hospital, clinical facility and/or patient rooms in an expedient manner.		
Maintain hand-eye coordination in order to always be aware of image scan plane and its orientation to the patient.		

AUDITORY ABILITY STANDARD

<i>Sonographers should possess the following auditory abilities:</i>	<i>Student can perform</i>	
	YES	NO
Hear auditory signals from monitors and console control panels.		
Hear auditory signals from various hospital patient equipment.		
Hear and properly react to building Public Announcement systems.		
Hear and differentiate frequencies from speakers during Doppler exams.		

INTELLECTUAL STANDARD

Ability to collect, interpret and integrate information and make decisions. <i>The Sonographer / Student should be able to:</i>	<i>Student can perform</i>	
	YES	NO
Read, comprehend, retain and apply relevant information in textbooks, medical records, and professional literature.		
Apply knowledge and learning to new situations and problem-solving scenarios.		
Collect and evaluate pertinent patient data and information to determine relevance to the requested exam. Integrate medical history and current symptoms to determine the appropriate protocol and tailor the ultrasound exam to the patient's needs.		
Determine contraindications, insufficient patient preparation, assess patient's physical and/or mental condition that will affect the patient's ability to tolerate the sonographic procedure.		
Measure, calculate reason, analyze, and synthesize sonographic information during the performance of each exam and during the acquisition of each image.		
Organize and accurately perform the individual steps in a sonographic procedure in the proper sequence.		
Process, respond, and draw conclusions from sonographic images, recognize and correct inconsistencies, correlate clinical information with sonographic findings and make specific assessments and determinations based on those findings and established criteria.		
Uses professional judgement to adapt the protocol for the patient's condition to optimize exam results.		
Notifies supervising physician(s) if emergency care is needed based on the sonographic findings and patient condition.		
Demonstrates effective clinical decision-making to perform sonographic scans/exams in all clinical settings within required time frames and in compliance with the Sonography ALARA principle.		
Understand and interpret written and verbal instructions.		
Comprehend multi-dimensional and spatial relationships of anatomy in order to establish a three-dimensional concept.		
Maintain concentration on images displayed on screen for duration of examination.		

BEHAVIORIAL AND SOCIAL ATTRIBUTES

<p>Possess the emotional health and stability required for full utilization of the sonographer/student's intellectual abilities, the exercise of good judgment, the prompt completion of all academic and patient care responsibilities and the development of mature, sensitive, and effective relationships with clients and other members of the health care team.</p> <p>Possess the ability to tolerate taxing workloads, function effectively under stress, adapt to changing environments, display flexibility and learn to function in the face of uncertainties inherent in clinical settings with patients.</p> <p>Possess compassion, integrity, concern for others, and motivation.</p> <p>Possess the ability to demonstrate professional behaviors and a strong work ethic.</p> <p><i>The Sonographer / Student should be able to:</i></p>	<i>Student can perform</i>	
	YES	NO
Manage fast paced and heavy didactic and clinical schedules and deadlines. Perform ultrasound exams in fast paced clinical settings and during clinical situations including emergency situations.		
Maintain focus and remain on task to function effectively during instruction and performance of sonograms under stressful conditions while exercising appropriate judgement. Responds to rapidly changing and unpredictable circumstances.		
Complete daily workload including technically difficult patients, emergency exams, and added exams within allotted time frames and the Sonographic ALARA principle.		
Demonstrate integrity, compassion, appropriate interpersonal skills, interest and motivation.		
Accept and utilize scanning critiques, self-assessment, and feedback to improve sonographic knowledge and skills.		
Collaborate with classmates to develop professional qualities and scanning skills.		
Manage personal life and obligations to maintain focus on didactic and clinical course requirements; maintain focus on the patient at all times and in all settings.		
Display flexibility and adaptability.		
Demonstrate a stable professional demeanor in all settings and with all individuals; manage emotions and responses to evaluations and feedback.		
Be able to be in close contact with patients (pediatric, geriatric, pregnant, acutely ill, contagious).		
Understand the implication of noncompliance with the legal standards.		
Learn by a variety of methods which includes, classroom, lab, groups, individual, and computer.		
Comply with the Sonographer Scope of Practice and Clinical Practice Standards (Society of Diagnostic Medical Sonography: www.sdms.org).		

Having read and initialed each statement above, I understand the Technical Standards for the Diagnostic Medical Sonography Program.

Student Signature: _____