

Gulfcoast Ultrasound Institute
CRITICAL CARE SONOGRAPHY

Day One

- 7:15 Welcome
- 7:30 Imaging Fundamentals
- 8:15 Break
- 8:30 Abdominal Scan Fundamentals
- 9:15 **“Live demonstration-Abdominal Scanning”**
 - Some system controls
 - Probe mechanics
 - Imaging windows & orientation
- 9:30 FAST examination
- 10:00 Break
- 10:15 Ultrasound-Guided Vascular Access
- 11:00 2D Cardiac Exam
- 12:00 5 minute stretch break
- 12:05 **“Live demonstration-Cardiac Scanning”**
- 12:30 Lunch
- 1:30 Hands-On
- 5:00 Adjourn

Day Two

- 7:30 Abdominal Pathology
- 8:30 Break
- 8:45 Cardiac Pathology*
 - PE (Pleural & Pericardial)
 - CHF
 - Hypotension
 - LV Function
 - Qualitative Assessment of valvular disease
 - TEE
- 10:00 Break
- 10:15 Extended FAST procedures**
 - Thoracentesis
 - Pericardiocentesis
 - Pneumothorax
 - Lung/Endotracheal Tube Placement
- 11:30 Venous Imaging for Acute DVT
- 12:00 Lunch
- 12:30 Hands-On
- 4:00 Adjourn

Course Description:

This program is structured with lectures using PowerPoint and interactive case studies during the morning sessions and hands-on workshops during the afternoon. Topics include Imaging Fundamentals, Abdominal/FAST examination, Focused Cardiac exam, Ultrasound-guided procedures, and evaluation of DVT.

The program is taught by critical care physicians and registered sonographers who are experienced performing and interpreting ultrasound examinations involving critical care applications. A critical component of the program is the extensive amount of hands-on instruction provided with a low participant to instructor ratio (typically 3:1).

Course Objectives: Critical Care Ultrasound

At the completion of the program the participant should be able to:

1. Discuss the basic fundamentals of ultrasound physics/instrumentation and recognize image artifacts.
2. Demonstrate the operation of the ultrasound system controls and transducer selection.
3. Perform routine scan protocols for evaluation of the abdomen, venous system of the lower and upper extremities, thorax and adult heart.
4. Recognize normal/abnormal image characteristics of the abdomen, thorax, upper and lower extremity venous system and adult heart.
5. Describe image orientation, transducer preparation, and scan protocols for performing use of ultrasound guidance in the placement of peripheral and central venous lines and arterial catheters.
6. Demonstrate ultrasound applications in the evaluation of the critically ill unstable patient.
7. Apply the information discussed in a clinical setting (ideally under supervised conditions until an acceptable level of proficiency and appropriate hospital credentialing has been achieved).

Target Audience: Physician participants may include (but is not limited to) Critical care, intensivists, pulmonologists, trauma, emergency medicine, Internal medicine, and Family practice physicians who will be involved with performing and interpreting ultrasound examinations in a critical care setting.