Introduction & Advanced Emergency Medicine Ultrasound

September 9 – 13, 2024

Attention! This course includes the following pre-course online video: “Imaging Fundamentals” by Lori Green, BA, RDMS, RDCS, RVT. Login to your account at gcus.com and navigate to “My Activities” to complete this video **prior** to the first day of this course.

Monday, September 9, 2024		
7:45	**Welcome and Continental Breakfast**	
7:55	**Interactive Polling Session**	
8:00	**Abdominal Scan Fundamentals**	**Trisha Reo, AAS, RDMS, RVT**
8:30	**Break**	
8:35	**FAST & Lung**	**David Bahner, MD, FAAEM, FACEP**
9:30	**Abdominal Aortic Aneurysm & Case Studies**	**James Mateer, MD, RDMS**
10:00	**Break out Groups**	
	Main Lecture Room	**Scan Lab**
	US Guided Central & Peripheral Vascular Access David Bahner, MD, FAAEM, FACEP	**Hands-On Scanning: FAST, Lung & Aorta**
11:00	**Switch Groups**	
	Main Lecture Room	**Scan Lab**
	US Guided Central & Peripheral Vascular Access David Bahner, MD, FAAEM, FACEP	**Hands-On Scanning: FAST, Lung & Aorta**
12:00	**Lunch – Optional Scan on Your Own with Phantoms for System Optimization and Needle Guidance**	
1:00	**Main Lecture Room**	**Scan Lab**
	Focused Cardiac James Mateer, MD, RDMS	**Hands-On Scanning: US Guided Central & Peripheral Vascular Access**
2:25	**Switch Groups**	
2:30	**Main Lecture Room**	**Scan Lab**
	Focused Cardiac James Mateer, MD, RDMS	**Hands-On Scanning: US Guided Central & Peripheral Vascular Access**
3:55	**All groups return to Main Lecture Room**	
4:00	**General Session: US Guided Procedures** • **Pericardiocentesis** • **Thoracentesis** • **Paracentesis** • **Hemothorax** • **Lumbar puncture**	**David Bahner, MD, FAAEM, FACEP**
5:00	**Adjourn**	

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Tuesday, September 10, 2024			
7:30	**Continental Breakfast**		
7:45	**General Session: Biliary & Renal Colic**		**Andrew Laudenbach, MD**
8:30	**Break out Groups**		
	Main Lecture Room	**Scan Lab**	
	Cardiac Arrest & RUSH DVT Evaluation David Bahner, MD, FAAEM, FACEP	**Hands-On Scanning: Focused Cardiac & Focused Abdomen**	
9:50	**Switch Groups**		
	Main Lecture Room	**Scan Lab**	
	Cardiac Arrest & RUSH DVT Evaluation David Bahner, MD, FAAEM, FACEP	**Hands-On Scanning: Focused Cardiac & Focused Abdomen**	
11:10	**General Session: Ocular & Airway/Thoracic Ultrasound** • **Ocular US** • **ET Verification** • **USG Cricothyrotomy** • **Alveolar / Interstitial Syndromes**		**Andrew Laudenbach, MD**
12:00	**Lunch: Scan Lab Open for Scan on Your Own with Phantoms for System Optimization and Needle Guidance**		
1:00	**Hands-On Scanning Sessions - Participants will rotate through applications below**		
	Main Lecture Room	**Scan Lab**	**Scan Lab**
	RUSH/DVT & Focused Abdomen	**USG Procedures, Ocular, Airway & Thoracic**	**Focused Cardiac**
5:00	**Adjourn**		

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Wednesday, September 11, 2024		
7:30	**Continental Breakfast**	
7:45	**ABC's: Sonography in Sepsis** • **Pneumonia** • **Renal Sepsis** • **Peritonitis/Abscess** • **Biliary Sepsis** • **Acute Appendicitis** • **Bowel Obstruction**	**James Mateer, MD, RDMS**
8:30	**Soft Tissue & Musculoskeletal Applications** • **Cellulitis, Abscess & Cutaneous Masses** • **Joint Effusion & Aspiration** • **Tendon Injury** • **Foreign Body Detection & Removal** • **Fracture Assessment & Reduction**	**Andrew Laudenbach, MD**
9:15	**Break out Groups**	
	Main Lecture Room	**Scan Lab**
	Interactive Emergency Medicine & Critical Care Case Studies Andrew Laudenbach, MD	**Hands-On Scanning: Soft Tissue/MSK Applications & Non-cardiac POCUS Choice**
10:30	**Switch groups**	
	Main Lecture Room	**Scan Lab**
	Interactive Emergency Medicine & Critical Care Case Studies Andrew Laudenbach, MD	**Hands-On Scanning: Soft Tissue/MSK Applications & Non-cardiac POCUS Choice**
11:45	**Interactive Post Polling**	
12:00	**Lunch**	
12:45	**Gyn Anatomy & Scan Protocols**	**James Mateer, MD, RDMS**
1:30	**Break out Groups**	
1:45	**Main Lecture Room**	**Scan Lab**
	Intrauterine & Ectopic Pregnancy James Mateer, MD, RDMS	**Hands-On Scanning: Full Bladder & Endovaginal Gyn**
3:15	**Break & Switch Groups**	
3:30	**Main Lecture Room**	**Scan Lab**
	Intrauterine & Ectopic Pregnancy James Mateer, MD, RDMS	**Hands-On Scanning: Full Bladder & Endovaginal Gyn**
5:00	**Adjourn**	

Attention! This course includes the following post-course online training video (non-CME): "PID & Masses" by James Mateer, MD, RDMS. Following the completion of this course, login to your account at gcus.com and navigate to "My Activities" to complete this video **within 2 weeks post-course. Access to this online video is limited to 2 weeks, beginning the day after the course ends.**

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Thursday, September 12, 2024		
7:30	Welcome and Continental Breakfast	
7:40	Interactive Polling Session	
7:50	General Session: Advanced Ultrasound Evaluation of Shock	Andrew Laudenbach, MD
8:55	Break out Groups	
9:00	Main Lecture Room	Scan Lab
	MI & Complications Robert Reardon, MD	Hands-On Scanning: Advanced RUSH with DVT
10:00	Break & Switch Groups	
10:15	MI & Complications Robert Reardon, MD	Hands-On Scanning: Advanced RUSH with DVT
11:15	Lunch	
12:15	Main Lecture Room	Scan Lab
	Intro to Right Heart & Echo Mimics Andrew Laudenbach, MD	Hands-On Scanning: Focused Cardiac
1:15	Switch Groups	
1:20	Intro to Right Heart & Echo Mimics Andrew Laudenbach, MD	Hands-On Scanning: Focused Cardiac
2:20	Break & Switch Groups	
2:30	Emergency Medicine & Critical Care Ultrasound Case Studies Charlotte Derr, MD, RDMS, FACEP, FPD-AEMUS	Hands-On Scanning: Focused Cardiac & POCUS Choice
3:30	Break & Switch Groups	
3:45	Emergency Medicine & Critical Care Ultrasound Case Studies Charlotte Derr, MD, RDMS, FACEP, FPD-AEMUS	Hands-On Scanning: Focused Cardiac & POCUS Choice
4:45	Adjourn	

Friday, September 13, 2024		
7:45	Continental Breakfast	
8:00	General Session: Fluid Responsiveness in the Critically Ill	Robert Reardon, MD
8:45	Break Out Groups	
9:00	Emergency Medicine Nerve Blocks	Charlotte Derr, MD, RDMS, FACEP, FPD-AEMUS
10:30	Ultrasound Evaluation of the Acute Scrotum	James Mateer, MD, RDMS
11:15	All Groups Return to Main Lecture Room	
11:30	Interactive Post-Polling with Discussion	
11:45	Lunch	
12:15	Optional Lunch Lecture: Emergency Medicine POCUS Case Presentations	Presented by: USF Emergency Medicine Residents
1:00	Hands-on Scanning Sessions: Emergency Medicine Nerve Blocks, POCUS Choice & Peel-off Scrotal US	
4:00	Adjourn	

** This is a tentative course itinerary. Lecture faculty, times and dates may be subject to change. Times listed are Eastern Time (ET).

Introduction & Advanced Emergency Medicine Ultrasound

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The Gulfcoast Ultrasound Institute is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Introduction to Emergency Medicine Ultrasound

The Gulfcoast Ultrasound Institute is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Gulfcoast Ultrasound Institute designates this live educational activity for a maximum of 24.0 *AMA PRA Category 1 Credits™.* Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 24.0 Medical Knowledge MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Approved by the American College of Emergency Physicians (ACEP) for a maximum of 24.0 hour(s) of Category I credit.

The Gulfcoast Ultrasound Institute designates an additional 1.25 *AMA PRA Category 1 Credits™* for the enduring educational activity "Imaging Fundamentals". Physicians should claim only credit commensurate with the extent of their participation in the educational activity.

This course also meets CME / CEU requirements for ARDMS. Note: While offering the CME credit hours noted above, activities are not intended to provide extensive training or certification for exam performance or interpretation.

Advanced Emergency Medicine Ultrasound

The Gulfcoast Ultrasound Institute designates this live educational activity for a maximum of 16.0 *AMA PRA Category 1 Credits™.* Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 16.0 Medical Knowledge MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Approved by the American College of Emergency Physicians (ACEP) for a maximum of 16.0 hour(s) of Category I credit.

This course also meets CME / CEU requirements for ARDMS. Note: While offering the CME credit hours noted above, activities are not intended to provide extensive training or certification for exam performance or interpretation.

Introduction & Advanced Emergency Medicine Ultrasound

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NEEDS STATEMENT:

The planning committee has determined a need for the following educational activity based on request from the medical community, expanded utilization of ultrasound, and lab accreditation requirements.

COURSE OBJECTIVES:

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

- Increase the participant's knowledge to better perform and/or interpret Emergency ultrasound examinations.
- Increase competence to incorporate protocols, scan techniques, and interpretation criteria into clinical practice
- State the basic fundamentals of ultrasound physics and demonstrate appropriate optimization for system controls.
- Demonstrate scan protocols for focused evaluation of the trauma patient (E-FAST exam), pneumothorax, abdomen, aorta/IVC, DVT, ocular & airway/thoracic, soft tissue and musculoskeletal applications, adult heart, and female pelvis.
- State an algorithm for uses of bedside ultrasound during cardiac arrest, sepsis, shock, and hypotension.
- Demonstrate image orientation, transducer preparation, and scan protocols for performing use of ultrasound guidance for central & peripheral vascular access, pericardiocentesis, paracentesis, thoracentesis, hemothorax, lumbar puncture, and joint aspiration.
- Differentiate normal/abnormal image characteristics of the abdomen, female pelvis, first trimester OB, and ectopic pregnancy.
- Identify sonographic characteristics associated with abdominal sepsis involving the hepatobiliary, renal, and GI systems.
- Identify the normal anatomy and function of the right heart.
- Recognize and quantify tricuspid valve and pulmonic valve disease.
- Recognize the sonographic characteristics of pulmonary emboli and common echocardiographic mimics.
- Evaluate fluid responsiveness in the critically ill patient.
- Recognize the sonographic appearance of individual nerves and list the advantages provided when ultrasound is used for performing regional nerve blocks.
- Perform testicular ultrasound and recognize acute abnormalities

While offering CME credit hours this activity is not intended to provide extensive training or certification for performance of or interpretation of Ultrasound Examinations. We recommend working under supervised conditions until an acceptable level of proficiency has been achieved.

A special thanks to the following commercial companies who provide various (in kind) support to help make our programs possible (companies listed are as of the time of printing):

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Disclosure of Relevant Financial Relationships With Commercial Companies/Organizations

Gulfcoast Ultrasound Institute, Inc. endorses the standards and essentials of the Accreditation Council for Continuing Medical Education for activities and the speakers at these activities disclose significant relationships with commercial companies.

Speakers having relevant relationships include receiving from a commercial company research grants, consultancies, honoraria and travel, or having a self-managed equity interest in a company.

FACULTY:

James Mateer, MD, RDMS
Clinical Professor, Emergency Medicine
Medical College of Wisconsin
Milwaukee, WI
No relevant financial relationships to disclose

Charlotte Derr, MD, RDMS, FACEP, FPD-AEMUS
Associate Professor of Emergency Medicine
Fellowship Director of Advanced Emergency Medicine Ultrasound Fellowship Program
University of South Florida Morsani College of Medicine
Tampa, FL
No relevant financial relationships to disclose

Lori Green, BA, RDMS, RDCS, RVT
Program Director
Gulfcoast Ultrasound Institute, Inc.
St. Petersburg, FL
No relevant financial relationships to disclose

Trisha Reo, AAS, RDMS, RVT
Program Coordinator
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No relevant financial relationships to disclose

David Bahner, MD, FAAEM, FACEP
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Columbus, Ohio
No relevant financial relationships to disclose

Robert Reardon, MD
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University of Minnesota Medical School
Assistant Chief of Emergency Medicine
Hennepin County Medical Center
Minneapolis, MN
No relevant financial relationships to disclose

Andrew Laudenbach, MD
Ultrasound Fellowship Director
Clinical Informaticist
Associate Professor of Emergency Medicine
Department of Emergency Medicine
Hennepin Healthcare
Minneapolis, MN
No relevant financial relationships to disclose

All presentations for this CME activity were reviewed and approved by member(s) of the GUI staff to determine content validity and ensure that no conflicts of interest exist prior to final course material compilation and printing.

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Disclosure of Individuals in Control of Content

In addition to the faculty listed on the previous page the following individuals are recognized by GUI as being in control of content of this program:

James Mateer, MD, RDMS (Medical Director-planner & QI Task Force)
Medical Director, Gulfcoast Ultrasound Institute
Milwaukee, WI
No relevant financial relationships to disclose

Charlotte Derr, MD, RDMS, FACEP, FPD-AEMUS (Co-Medical Director-planner & QI Task Force)
Associate Professor of Emergency Medicine
Fellowship Director of Advanced Emergency Medicine Ultrasound Fellowship Program
University of South Florida Morsani College of Medicine
Tampa, FL
No relevant financial relationships to disclose

Andreas Dewitz, MD, RDMS (Member of Advisory Board & QI Task Force Subcommittee)
Clinical Professor of Emergency Medicine
Clinical Director of POCUS Education, Solomont Simulation Center
Department of Emergency Medicine
Boston Medical Center
Boston, MA
No relevant financial relationships to disclose

Lori Green, BA, RDMS, RDCS, RVT (Program Director-planner, Content Reviewer, QI Task Force)
Gulfcoast Ultrasound Institute, Inc.
St. Petersburg, FL
No relevant financial relationships to disclose

Trisha Reo, AAS, RDMS, RVT (Program Coordinator-planner, Content Reviewer, QI Task Force)
Gulfcoast Ultrasound Institute, Inc.
St. Petersburg, FL
No relevant financial relationships to disclose

HANDS-ON INSTRUCTORS:
At the time of printing **all hands-on instructors for this program have signed disclosure forms and have no relevant financial relationships to disclose.** A verbal disclosure will be made during opening remarks. All scanning sessions are monitored by the program director and/or the program manager to ensure education objectives are met and no commercial bias occurs.

Content:
All content for this CME activity were reviewed and approved by member(s) of the GUI staff to determine content validity and ensure that no conflicts of interest exist prior to final course material compilation and printing.

Reviewed & approved:

Lori Green BA, RDMS, RDCS, RVT
Trisha Reo AAS, RDMS, RVT

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Welcome!!

The entire staff at Gulfcoast Ultrasound Institute would like to welcome you to our educational facility.

Our goal is to provide the highest quality continuing education possible in a relaxed and personal atmosphere. The content of each program has been carefully planned to provide you with the information needed to obtain a firm foundation to begin gaining the experience to perform and/or interpret ultrasound examinations in the specialty of your choice. The program will be structured with lectures in the morning and hands-on sessions during the afternoon to allow more individualized attention the program participants will be divided into groups for the hands-on workshops based on your experience level and type of equipment you work with.

To help you get the most out of this program we would like to make the following recommendations:

1. Attend the lectures and scheduled hands-on sessions.

2. When you are not involved in a scheduled afternoon session, take advantage of the SUPPLEMENTAL SCANNING WORKSHOP or check out a DVD from our library.

3. If you do not understand a particular concept, ASK FOR HELP!

4. Study your course workbook during the evening.

5. Remember excellence is not achieved overnight. Becoming proficient in any ultrasound specialty requires the commitment to continually study and perform multiple (at least 100) exams before an initial level of confidence is achieved. The AIUM guidelines suggest competency for interpretation requires a minimum of 500 exams per specialty.

6. Begin scanning immediately upon return to the ultrasound departments even if it's on a volunteer. We recommend scanning/interpretations under supervised conditions until an accepted level of proficiency has been obtained.

All of our instructors, guest speakers and office staff are here to serve you! If you have questions of any kind, please do not hesitate to ask.

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Gulfcoast Ultrasound Institute
EQUIPMENT RECOMMENDATIONS

Since 1985, Ultrasound Institute has taken great pride in our ability to provide quality continuing education programs while remaining unbiased regarding the recommendation of ultrasound equipment.

Our programs are supported by most of the major equipment manufactures by providing their systems for use during the hands-on sessions. These companies have learned their products will be used and demonstrated to the best of our abilities in an educational setting and that no selling or promotion is done on our premises.

We realize that some of the course participants may currently be in the process of evaluating equipment for purchase and would like the opinions of our staff to determine the “best” system for your department. Everyone has a “favorite” ultrasound system (usually because it is the one they have worked with the most and are comfortable with) however, Gulfcoast Ultrasound must take an unbiased position in regards to equipment recommendations.

If you are currently evaluating equipment for purchase, we suggest you invite the equipment manufacturers to your facility for a private demonstration to determine image quality, ease of use, over-all capabilities etc. on an individual basis.

Thank you!

Lori Green BA, RDMS, RDCS, RVT

Lori Green, BA, RDMS, RDCS, RVT
Program Director