



# Introduction to Emergency Medicine Ultrasound and Advanced Emergency Medicine & Critical Care Ultrasound

September 12 – 16, 2022

## Monday, September 12, 2022

7:30	Welcome and Continental Breakfast	
7:45	Interactive Polling Session	
8:00	Imaging Fundamentals	Lori Green, BA, RDMS, RDCS, RVT
8:45	Break	
8:55	OB-GYN Anatomy/Exam	James Mateer, MD, RDMS
9:45	Break	
9:55	Ectopic Pregnancy	James Mateer, MD, RDMS
10:40	Break	
10:50	OB Cases + Abortion	James Mateer, MD, RDMS
11:50	Break	
11:55	Fundamentals of Needle Guidance	James Mateer, MD, RDMS
12:30	Lunch	
12:45	Optional Video Lecture: PID & Masses	James Mateer, MD, RDMS
1:30	Hands-On Scanning: GYN, System Optimization, & Needle Guidance (phantoms)	
5:00	Adjourn	

## Tuesday, September 13, 2022

7:20	Continental Breakfast	
7:30	Interactive Polling Session	
7:45	Ultrasound-Guided Vascular Access	David Bahner, MD, FACEP
8:45	Break	
9:00	Abdominal Scanning Fundamentals	Trisha Reo, AAS, RDMS, RVT
10:00	Break	
10:05	FAST + e-fast	David Bahner, MD, FACEP
11:05	Break	
11:15	Focused 2D Cardiac Exam (F.A.T.E.)	James Mateer, MD, RDMS
12:15	Lunch	
12:30	Optional Video Lecture: Abscess & Joint Aspiration	James Mateer, MD, RDMS
1:30	Hands-On Scanning: E-FAST, Syst Optimization, Focused Cardiac & UGVA	
5:00	Adjourn	
5:30 – 6:30	Optional Welcome Reception	

## Wednesday, September 14, 2022

7:30	Continental Breakfast	
7:45	Biliary & Renal Colic	Andrew Laudenbach, MD
8:30	AAA & Case Studies	James Mateer, MD, RDMS
9:00	Break	
9:05	Evaluation of DVT	David Bahner, MD, FACEP
9:40	Evaluation of Cardiac Arrest, Shock & Hypotension	
10:40	Break	
10:50	Ultrasound-Guided Procedures: Pericardiocentesis, Paracentesis, Hemothorax, Lumbar Puncture	Alexander Levitov, MD, RDCS, FCCM, FCCP
11:45	Interactive Polling Session with discussion	
12:00	Lunch	
12:45	Optional Lecture: Training & Credentialing	All Faculty
1:30	Hands-On Scanning: Abd/FAST, Focused Cardiac, DVT & Procedures	
5:00	Adjourn	



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Thursday, September 15, 2022		
7:25	Welcome and Continental Breakfast	
7:35	Interactive Polling Session	
7:50	Ultrasound Evaluation of Shock	Andrew Laudenschlager, MD
8:50	ABC's: Sonography in Source of Sepsis - Gallbladder & Biliary Tree - Appendix - Bowel Obstruction - Peritonitis & Abscess - Pyelonephritis - Pneumonia	James Mateer, MD, RDMS
9:40	Break	
9:50	Fluid Responsiveness in the Critically Ill & VExUS	Alexander Levitov, MD, FCCM, FCCP, RDMS
10:50	Break	
11:00	Ultrasound Guided Peripheral Vascular Access: Challenges, Pitfalls/Tips & Tricks with Live Demonstration	Charlotte Derr, MD, RDMS, FACEP
12:00	Lunch	
12:15	<b>Optional Video Lecture:</b> Color Doppler Ultrasound: The Fundamentals	Lori Green, BA, RDMS, RDMS, RVT
1:00	Hands-On Scanning	
4:30	Adjourn	

Friday, September 16, 2022			
7:30	Welcome and Continental Breakfast		
7:45	Interactive Cases: What's Your DX?	James Mateer, MD, RDMS Charlotte Derr, MD, RDMS, FACEP Alexander Levitov, MD, FCCM, FCCP, RDMS	
8:30	Break		
<i>Split Lecture Sessions: Choose Your Track</i>			
<b>CRITICAL CARE ULTRASOUND: Scan Lab</b>		<b>EMERGENCY MEDICINE: Main Lecture Room</b>	
8:45	Cardiac Doppler & Focused Calculations Presented by: Dan Bourque, MS, RCS, FASE	8:45	Sonography of the Acute Scrotum: Presented by: James Mateer, MD, RDMS
9:30	Break		
9:40	Echo Assessment of Cardiomyopathies & Heart Failure Presented by: Alexander Levitov, MD, FCCM, FCCP, RDMS	9:40	Advanced EM Applications: <ul style="list-style-type: none"> <li>Evaluation of Soft Tissue for Abscess Identification &amp; Foreign Body Detection</li> <li>Musculoskeletal Applications</li> <li>Evaluation of Bony Cortices for Rapid Fracture Diagnosis/Post-Reduction Bony Alignment</li> <li>Evaluation of the Eye for Selected Ocular Emergencies</li> <li>Verification of Endotracheal Tube Placement</li> </ul> Presented by: Charlotte Derr, MD, RDMS, FACEP
10:40	Break		
10:45	MI & Complications Presented by: Alexander Levitov, MD, FCCM, FCCP, RDMS	11:10	Break
11:45	Evaluation of the Right Heart Presented by: Alexander Levitov, MD, FCCM, FCCP, RDMS	11:20	Nerve Blocks in the ED: Forearm, Truncal, Femoral & Selected Ankle Blocks Presented by: Charlotte Derr, MD, RDMS, FACEP
12:25	Break: All Return back to Main Lecture Room		
12:30	Interactive Polling with Discussion		
12:45	Lunch		
1:00	<b>Optional Lecture:</b> Emergency Medicine Cases	Presented by: USF Medical Residents	
1:30	Hands-On Scanning		
4:30	Adjourn		

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



## Introduction to Emergency Medicine Ultrasound and Advanced Emergency Medicine & Critical Care 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.

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 & Critical Care 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.

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

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.



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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:

1. Increase participant's knowledge to better perform and/or interpret Emergency and Critical Care Ultrasound examinations.
2. State the basic fundamentals of ultrasound physics and demonstrate appropriate optimization of system controls.
3. Perform ultrasound evaluation of the trauma patient (E-FAST exam).
4. Perform ultrasound evaluation of the lung, ocular, soft-tissue, musculoskeletal, bony cortices, and verification of endotracheal tube placement in the emergency department.
5. Demonstrate image orientation, transducer placement, and scan protocols for performing ultrasound evaluation of pneumothorax.
6. Demonstrate scan protocols for focused evaluation of the abdomen, aorta, and adult heart, and lower extremity DVT.
7. Demonstrate image orientation, transducer preparation, and scan protocols for performing ultrasound guided vascular access.
8. Perform testicular ultrasound and recognize acute abnormalities.
9. Differentiate normal/abnormal image characteristics of the abdomen and adult heart.
10. State an algorithm for assessing causes of shock and hypotension using bedside ultrasound.
11. Demonstrate protocols for performing thoracentesis, pericardiocentesis, paracentesis, and lumbar puncture.
12. Increase competence to incorporate protocols, scan techniques, and interpretation criteria into clinical practice.

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.

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*A special thanks to the following ultrasound equipment manufacturers who provide various (in kind) equipment 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:

**Alexander Levitov, MD, FCCM, FCCP, RDCS  
(GUI QI Task Force Subcommittee)**  
Eastern Virginia Medical School  
Norfolk, VA  
*No relevant financial relationships to disclose*

**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**  
Assistant Professor of Emergency Medicine &  
Fellowship Director of Emergency Medicine  
Ultrasound Fellowship Program  
University of South Florida Medical School  
Tampa, FL  
*No relevant financial relationships to disclose*

**David Bahner, MD, FACEP**  
Professor and Director of Ultrasound  
Emergency Medicine  
Ohio State University  
Columbus, Ohio  
*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  
Gulfcoast Ultrasound Institute, Inc.  
St. Petersburg, FL  
*No relevant financial relationships to disclose*

**Daniel Bourque, MS, RCS**  
Orlando Regional Medical Center  
Orlando, FL  
*No relevant financial relationships to disclose*

**Andrew Laudenschlager, 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 (Co-Medical Director-planner & QI Task Force)**

Assistant Professor of Emergency Medicine &  
Fellowship Director of Emergency Medicine  
Ultrasound Fellowship Program  
University of South Florida Medical School  
Tampa, FL

*No relevant financial relationships to disclose*

**Andreas Dewitz, MD, RDMS (Member of Advisory Board & QI Task Force Subcommittee)**

Associate Professor of Emergency Medicine  
Vice Chair of Ultrasound Education  
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 Gulfoast 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 any 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