

**Medical College of Georgia
Center of Ultrasound Education**

Teaching Ultrasound

Introduction to Point-of-Care Ultrasound (POCUS) for the Faculty Educator

Purpose: This course to acquaint the AUMC faculty with basic Point-of-Care Ultrasound (POCUS), develop basic POCUS skills and to relate these skills to the Undergraduate Medical Education (UME) student ultrasound curriculum and the Graduate Medical Education (GME) resident ultrasound curriculum.

Goals:

1. Faculty will acquire basic knowledge of Point-of-Care ultrasound technology, employ POCUS in a clinical setting, recognize the relevance and value of POCUS to the educational experience (basic and clinical science) of MCG medical students and residents.
2. Faculty will acquire teaching techniques to assist MCG medical students and residents to incorporate POCUS into clinical practice.

Course Description: This ultrasound course is intended to introduce faculty to the concepts and hands-on skills necessary for basic POCUS scanning techniques found in the UME and GME curriculum. The didactic portion of the course includes: rationale for POCUS, basic scanning orientation and anatomy, and a limited introduction to common POCUS exams. Workshops will include hands-on practice while obtaining appropriate imaging on normal patient subjects. Hands-on scanning will also be required during the mini-course utilizing personal, ultraportable ultrasound systems. Reflective and application exercises will support the faculty in strengthening the use of POCUS in clinical practice training sites.

Course Expectations: The mini-course will be over approximately 6 weeks and consist of 4 in-person didactic and hands-on practice sessions. These sessions will be approximately every 2 weeks on Wednesday afternoons from 4-6 pm. Each participant will be assigned a personal, ultraportable ultrasound system for use during the course. Participants will obtain a minimum of 5 ultrasound exams after each hands-on session which will be reviewed by course faculty. Ultrasound-focused teaching interactions during each 2-week interval may be included. Participants will be scheduled a 90-minute scanning session with course faculty to scan patients in the Emergency Department (ED) or in the participant's clinical area within the health system. These sessions will entail one-on-one instruction but may also involve student or resident teaching.

Course Schedule

Week 1 -

Topic: Orientation

Curricular Tie-in: UME year 1-2, GME Introduction Module

Lecture: Introduction to POCUS - What is it?; Liver Anatomy and Physiology

Objective: The learner will be able to describe what POCUS is and how it differs from traditional radiology ultrasound. The learner will be able to relate POCUS principles to curriculum taught to the UME and GME students. The learner will be able to operate the individual portable ultrasound system used in the course.

Workshop: Getting to know your machine and ultrasound basics – right upper quadrant abdomen

Assignment: 90-minute hands-on scanning session, 5 independently performed RUQ abdominal Scans, complete online questionnaire/log.

Week 2 –

Topic: Abdominal Ultrasound

Curricular Tie-in: UME year 1, 2, Surgery Clerkship, GME July FAST Module

Lecture: FAST Exam - Not Just for Trauma, Algorithms in Medical Education, Renal US

Objective: The learner will be able to perform a FAST exam and relate how this exam is an orientation to abdominal scanning.

Workshop: FAST - Standardized patients

Assignment: 90-minute hands-on scanning session, 5 independently performed FAST scans, complete online questionnaire/log.

Week 3 -

Topic: Abdominal Vasculature

Curricular Tie-in: UME Year 1, 2, Family Medicine Clerkship, GME Abdominal Vascular Module

Lecture: Evaluation of the Aorta and IVC – Screening for AAA and Volume Assessment

Objective: The learner will be able to perform an abdominal aorta and IVC exam and relate how this skill can be used to help UME and GME students better evaluate their patients.

Workshop: IVC/Aorta - Standardized patients

Assignment: 90-minute hands-on scanning session, 5 independently performed aorta and IVC Scans, complete online questionnaire/log.

Week 4 -

Topic: Cardiac Orientation

Curricular Tie-in: Internal Medicine Clerkship, EM clerkship, GME Cardiac Module, Shock Module

Lecture: Orientation to the Cardiac Windows and Global Function Assessment

Objective: The learner will be able to obtain images of the heart and determine global function. They will be able to relate how this skill will help UME and GME students better evaluate and care for their patients.

Workshop: Cardiac windows with standardized patients

Assignment: Scanning with the faculty, Completion of the on-line Ultrasound Interactive Module with a medical student or resident, complete online questionnaire/log.

Post Workshop Wrap up: TBD within 2 weeks of course completion

One-on-one debriefing to determine the outcomes of the course (estimated duration 30-45 min.)

To Register – Contact Becky Etheridge at retheridge@augusta.edu

Questions – Contact Matt Lyon, MD at mlyon@augusta.edu or 706-533-2936