

Course Name: Exploration of Point of care Ultrasound Course Number: EMED-2003

Department: Department of Emergency Medicine

Faculty Coordinator: Jodi Jones MD
Mandy Pasqual MD
Steven Field DO

Location: (where rotation is offered) PMH

Length: 2 weeks

Prerequisites (if any): Pre-Clerkship students only

Periods offered: 1-12

Number of students per 2 week period: 2

First day Contact: Latonya Jones- 214-648-2676 or Latonya.Jones@UTSouthwestern.edu

First day time: 0900

First day location: E4.300

I. Course Description:

EMED 2003 is designed to introduce to students a fundamental understanding of goal-directed point of care ultrasound, a method of examination that answers specific and important clinical questions. Drawing upon the skills of basic anatomy knowledge, clinical physical exam and the selection of the appropriate patient based on presenting complaint, high quality ultrasound images will be obtained at the bedside. It is expected that the student learner will be able to integrate point of care ultrasound knowledge along with other investigations into the clinical picture for a given patient scenario. The skills acquired in bedside ultrasonography will be applicable not only to emergency medicine but to other specialties including internal and family medicine, OB/GYN, critical care, surgery, anesthesiology, radiology, orthopaedics and pediatrics.

II. Learning goals/objectives/Assessments:

Goals	Objectives	Assessment methods
Patient Care: Students will learn how to integrate ultrasound into the clinical evaluations and	1. Use of point-of-care ultrasound to perform limited, focused diagnostic	

investigations of multiple patients at the bedside.	ultrasound evaluations to improve patient care.	
Medical Knowledge: <ol style="list-style-type: none"> 1. Understand the basic knowledge of clinical and point-of-care ultrasound 2. Recognize indications for point-of-care ultrasound 3. Recognize classic examination windows and be able to interpret bedside ultrasound of anatomical regions in a timely manner 4. Learn to identify the key anatomic landmarks and ultrasonographical findings used to diagnose focused pathologic conditions 	<ol style="list-style-type: none"> 1. Perform/interpret images of FAST, aorta, cardiac, biliary, renal, thoracic, DVT, and soft tissue/abscess examinations. 2. Identify free fluid on an abdominal/thoracic ultrasound 3. Identify pathologic conditions with ultrasound, i.e. cholecystitis, pneumothorax, hydronephrosis, ascites, AAA, and abscess. 	<p><i>The student will complete a brief quiz at the end of the rotation</i></p> <p><i>At the end of the rotation the student will list in writing the 3 most common reasons for referral to the service, and the criteria for a well-constructed referral.</i></p>
Interpersonal and Communication skills: <ol style="list-style-type: none"> 1. Communicate with patients during performance and evaluation of bedside US examinations 2. Communicate effectively with other ultrasound team members 3. Understand development of US imaging storage systems and their role in learning, clinical care and quality improvement 	<ol style="list-style-type: none"> 1. Create patient and family rapport during required number of ultrasound examinations 2. Demonstrate verbal, written and imaging skills regarding point-of-care ultrasound with fellow students, residents and faculty 3. Correctly save, store and retrieve US imaging for learning and quality improvement purposes. 	<p><i>The student will be evaluated based on oral presentation on rounds and chart documentation for one assigned patient daily</i></p>

<p>Professionalism: Students must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.</p> <ol style="list-style-type: none"> 1. Develop behaviors respectful of patient comfort and privacy while performing exams 2. Present self as professional health care team member in all aspects of bedside patient care utilizing point-of-care ultrasound 	<ol style="list-style-type: none"> 1. Demonstrate how to appropriately drape patients during appropriate ultrasound examinations. 2. Demonstrate professional appearance and behaviors toward patients and medical colleagues 	<p><i>Based on observation of attendance at and participation in rounds</i></p>
<p>Practice Based Learning and Improvement:</p> <ol style="list-style-type: none"> 1. Systematically use quality improvement (QI/QA) methods as basis of point-of-care ultrasound skill improvement 2. Develop methods of learning such as evidence based medicine, online resources in point of care ultrasound 3. Incorporate formative rotation evaluation feedback into self-reflection and setting learning goals 	<ol style="list-style-type: none"> 1. Participate and contribute to scheduled QA review of all completed studies, both by student, residents and faculty during monthly conferences 2. Mastery of utilizing references such as American College of Emergency Physician's online ultrasound curricula, SonoGuide, core texts such as Emergency Ultrasound by Ma, Mateer and Blaivas. 3. Participate in real time and scheduled evaluation sessions by fellow ultrasound students, fellows and faculty. 	

System based practice: <ol style="list-style-type: none">1. Understand the value and use of point-of-care ultrasound across all medical specialties in the care of various populations of patients.2. Learn about the integration of point-of-care ultrasound in local hospital systems, Prehospital environments, and institutional educational programs.	<ol style="list-style-type: none">1. Demonstrate examples and application of ultrasound in clinical areas such as wards, clinics, intensive care units and other areas of patient care.2. Provide evidence of integration of ultrasound principles and practice in undergraduate/graduate medical education, patient care and research purposes using online resources and local system uses.	
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III. Methods of Instruction: *examples: attendance at and participation in rounds, case conferences, assigned patient daily under supervision of resident/fellow/attending; didactic classes, required reading assignments*

IV. Schedule:

ORIENTATION:

Students will be expected to be enrolled in this course as the first day of the UTSW academic periods. The first two Wednesdays are mandatory orientation days where you will meet the remainder of Team Ultrasound, consisting of the US attending, fellows and residents. All Wednesdays are non-negotiable and may not be missed for any reason. Often the POCUS student period will be offset from the EM/Resident blocks of time. Each Monday that begins a student period there is a great deal of online prerequisite work that must be done. These involve pretests and video lectures that must be reviewed prior to your first orientation day on the first Wednesday of each period.

First Monday and Tuesday:

- Look at POCUS Activities page on Moodle
- Complete the Pre-Tests 1 and 2

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- Submit these tests as two files as directed
- Read and complete as many of the online required reading modules as possible after taking the Pre-Tests

First Wednesday:

- Meet Team Ultrasound at 0700 in the Emergency Medicine Conference Room E4.300
- Orientation to course, machines, procedures, storing images et.al

Schedule:

Every WEDNESDAY throughout the course is a MANDATORY event and must be attended. If this is not possible please choose a different elective

After your first Wednesday, Team Ultrasound will supply you with dates of resident, fellow, and attending schedules. These scanning shifts will be proctored. More information on when and how will be given to you during orientation.

Prerequisites:

None

V. Course requirements:

In order to satisfy this Pass/Fail course, the student must

1. Complete all required reading modules
2. Complete and submit to course directors 2 Pre Tests prior to the rotation and one Post Test on their final Wednesday in the course
3. Attend all Wednesday Team Ultrasound QA and lecture series.
4. Maintain high professional standards and be an interested participant as expected of all medical students.

VI. Methods of evaluation:

An end of rotation evaluation form will be filled out and submitted by Team Ultrasound for each student. Each student is encouraged to consult with the course directors and Team Ultrasound as the month progresses to obtain real time feedback on areas of strengths and weaknesses so that there are no surprises when it comes down to formal written evaluations.

VII. Testing:

Pre-Tests are completed on the first Monday/Tuesday of any given academic period and submitted to the course directors on that first Wednesday.

A Post-Test is available at the end of the rotation and must be submitted to the course directors on or after the last Wednesday until the end of the academic period. Tests submitted after the end of the academic period are considered late and will be not be accepted. If any or all of these tests are not submitted in a timely fashion, an incomplete grade will be submitted and remediation of the course will be done in conjunction with the Deans of Student Affairs and the Registrar

This course will be pass/fail only with combination of satisfactorily completing goals and objectives, testing and evaluations

VII. Recommended reading:

The more you experience online learning in Ultrasound, the greater of an appreciation you will have when spending time with your dedicated Ultrasound faculty and residents. Take the time to review what is out there in the world. A huge variety of resources exist for self-learning in POCUS. A few have been embedded in your Moodle Course. Look on both pages for

ACEP Section on US website

Society of Ultrasound in Medical Education

AIUM

SonoSpot

These are just a starting point and have drop down menus for student's just learning ultrasound. Additional resources to look at include:

[Ohio State's iPhone/Android app for POCUS](#)

[Sonocloud](#)

[SAEM's Academy of Emergency Ultrasound](#)

These are not meant to be an exhaustive list and multiple more resources can be found. Start exploring and learning!