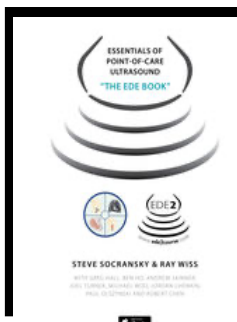




How EDE Bootcamps Work

Point of Care Ultrasound is a valuable but demanding skill. A great deal of practice is necessary to develop adequate image generation skills, problem solving techniques, and clinical integration. Your time is valuable and taking weeks or months away from practice to master this skill is not feasible for most. To meet these requirements this workshop is unlike almost any other continuing education you will have experienced. Bootcamp consists of a concentrated, intense hands-on learning with one-to-one supervision. A skills assessment with over four hours of exams is included. There is a ten hour online pre-course set of modules to complete as part of a flipped classroom program. In total, over 40 hours of training and learning is involved.

Pre-course



Participants are provided access to the online modules approximately 4 weeks prior to the bootcamp. All needed materials are provided including written content, video tutorials, and pretest questions. If anyone wishes to do further reading, (though not required), one can obtain the *Essentials of Point of Care Ultrasound* by Steve Socransky, available at the Apple iBookstore. There is also a hardcover version available for order. Go to www.ede2course.com for more info. Schedule at least 10 hours to review the online course material. The written exam is challenging, and the failure rate is high for those who do not study well before the workshop.

The CPOCUS website (www.cpocus.ca) now offers extensive preparation videos and written modules for most of the bootcamp content and should be reviewed to prepare for the exams. Membership is now included with bootcamp registration.

Content

For the CORE Bootcamp program participants will learn to perform scans for detecting global cardiac contractility, pericardial effusions, abdominal aortic aneurysms, abdominal free fluid, 1st trimester pregnancy, pneumothorax, and pleural effusions.

Scanning stations

After an introductory presentation most time is spent moving station to station getting as many scans done as possible on each live model. Approximately 8 minutes is provided per person per model then off to the next station. Initially learners may only finish one scan. Eventually they will be completing 3 or 4 per model. Bootcamp's goal is to not only get someone scanning safely but also efficiently. If it takes 7 minutes to do a single scan in a real clinical setting, this lone data point is not going to be worth the time in a busy practice environment and clinicians will stop using POCUS. As the day progresses there will be less time provided per scan. A timer notifies participants when it's time to change positions with partner and then when it's time to change stations. An instructor signs off on all scans before then move to the next station. In total there are at least 10-12 two-hour scanning sessions scheduled.



Partners

Most learners will be working most of the time with a partner. While one partner scans the other watches. Most courses use a paperless system where the instructor enters all scans into a tablet computer at the bedside.

The entire group is continually assessed to determine who are the fastest and slowest scanners. Partners are changed during the day to group fast and slow people together to maximize scanning time and to let the slower scanners observe what helps the fast people scan more quickly. In turn faster learners will often recognize some of the techniques performed by the slower partner that are an improvement on their own approach.

Feeling overwhelmed?

For those who need more time and dedicated instruction, they may be put on a solo station with no partner for a scanning session to double their practice time. There is always an education supervisor who will be constantly assessing all participants to determine what their strengths and weaknesses are and tailoring the learning experience.

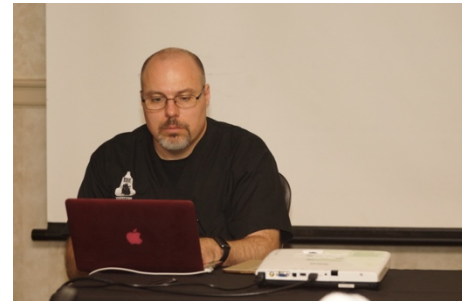
Written Exam

After lunch on day one, half of participants will scan on their own while their partner takes the written exam.

They then switch places after an hour.

The exam is taken online with immediate feedback on incorrect answers.

If the exam is not passed on the first attempt, it can be retaken on the morning of day two, before scanning begins.



Determinate Scans

Each participant must obtain a minimum number of determinate scans that are of adequate quality and show the critical areas of interest for each application. For some models the scans will be indeterminate because of difficulty or time constraints. Understanding when to declare a scan as inadequate and how to incorporate findings into clinical practice is a critical part of the bootcamp program.

Unassisted Scans

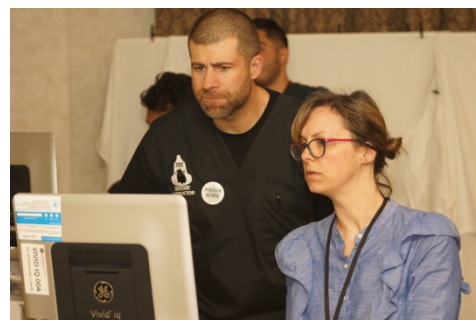
Participants must also complete a certain number of scans unassisted by their instructor to prove they are ready for the exams and independent practice. Unassisted scans are only attempted when the learner and their instructor feel they are ready. Extra practice scans are always available in preparation.

Logbooks

Each learner will have all their scans digitally documented by bedside instructors. Learning challenges are noted so that the next station's supervisor can correct deficits and introduce further skills as the student improves. Upon completion of the bootcamp, participants are provided a downloadable logbook file of all their scans which can be useful for quality assurance and for meeting privileging requirements in different practice settings.

Practical Exams

The practical exams usually begin at the end of day two and continue on day three. Like a structured observed clinical exam, the instructor will follow a check list and ask learners to demonstrate how to prepare to scan, greet and position the patient, generate the image, problem solve the difficult scan, then clean and put away the machine. If a critical error is made, the participant will be informed about how many more scans should do before re-attempting the test to ensure skills and knowledge are at a safe level. If a minor error is made the instructor will discuss the key information and if there is adequate understanding a retest can be conducted immediately. Participants can ask to take a practice exam first if they are nervous or want further preparation.



Visual Exams

Sometimes at the end of day two or but usually on the end of day three learners will be paired off with an instructor to do the visual exam. These are interactive sessions where they watch videos and images and answer questions.

This is where participants get to see pathology and demonstrate how to incorporate findings into clinical management. The visual exam is designed to be both a learning exercise and an assessment of POCUS understanding.

Should critical errors or too many noncritical errors be made during the exam, the instructor will review what went wrong and reinforce important learning points then the learner will repeat that exam module with another instructor.

The visual exam to take approximately 2 hours.

Transvaginal Stations

With the CORE bootcamp, whenever possible, there is access to training in transvaginal 1st TM pregnancy scanning. While not required for IP certification, the TV approach is valuable for detecting early pregnancy. Learners will begin by practicing probe movements and image interpretation on a haptic feedback simulator with real patient scan videos, then afterwards practice scanning on live models.



CPoCUS Certification

For those who are interested, when a participant has successfully completed all required scans and passed all exams, an application for Independent Practitioner Certification is submitted to the Canadian Point of Care Ultrasound Society (CPoCUS.) Some provinces recognize this certification as a prerequisite to bill for performing POCUS. A large amount of CME credits is also available as the program is accredited by both the College of Family Physicians of Canada and the Royal College of Physicians and Surgeons of Canada.

The participant will receive an email from CPoCUS that provides a link should they wish to obtain CFPC or Royal College CME credits and an official certificate. The cost of the certificate is included with bootcamp registration. For more information about the organization, go to www.cpus.ca.

Full length days

Participants can expect to start at 0700 and finish at 1800 each day. On day two, some volunteers can stay until 2000 to attempt the visual exams so they can leave earlier on day three. On day three, most participants are done by 1600 but those who took the longest to complete their scans, or who had to retake exams may finish later. It is strongly recommended to NOT arrange flights or trains for afternoon departures.

Supportive environment

Bootcamp takes the education process very seriously with constant debriefing and improvements to the program. All instructors must complete their own apprentice training process with supervision by master instructors.

Participants learn at different speeds and may need additional assistance. Real-time assessment of each participant is recorded and shared with all instructors. An education supervisor constantly checks in on all learners to determine if more resources or alternative approaches might be required. The goal is to provide an environment where every participant can become safe and confident in performing core point of care ultrasound, regardless of their background or original skillset.

Tentative Schedule

	Days One		Day Two		Day Three
700	Intro/Review/Breakfast	0700	Review/Breakfast	0700	Review/Breakfast
730	scan 1	0730	scan 9	0730	Scan 1-Practicals begin
830	break	0830	break	0830	Break
845	scan 2	0845	scan 10	0845	Scan 2
945	break	0945	break	0945	Break
1000	scan 3	1000	scan 11	1000	Scan 3
1100	break	1100	break	1100	Break
1115	scan 4	1115	scan 12	1115	Scan 4
1215	lunch	1215	lunch	1215	Lunch
1300	scan 5 or written exam	1300	scan 13	1300	Scan 5
1400	break	1400	break	1400	Visual exams for half participants
1415	scan 6 or written exam	1415	scan 14	1415	
1515	break	1515	break	1515	
1530	scan 7	1530	scan 15	1530	Exam retakes
1630	break	1630	break	1630	
1645	scan 8	1645	scan 16	1645	Everyone done
1745	Day completed		Day completed for half		
		1800	Visual exams for half		
		2000	Everyone done for day		