**Available training in transesophageal and transthoracic echocardiography**

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| **CME Courses and Workshops (not online)** | | | | | | |
| **Coursea** | **Sponsoring Institution, Location** | **Duration (days)** | | **Costb**  **($)** | **Notes** | **URL** |
| Echo Week | SCA. Atlanta, GA | 5 | | >1,000 | TEE focused, >400 participants | [www.scahq.org](http://www.scahq.org) |
| Boston Echo Course | Harvard Medical School, Boston, MA | 3 | | 1,490 | TEE focused, regional and TTE workshops also offered | <http://cme.hms.harvard.edu> |
| Perioperative Review Course | University of Utah, Salt Lake City, UT | 3 | | 800 | TEE focused, mainly didactics | <http://medicine.utah.edu/anesthesiology/tee/> |
| Introduction to adult echocardiography | Gulfcoast Institute | 5 | | 2,325 | General echo, didactics, case-based, workshops | [www.gcus.com/echo](http://www.gcus.com/echo) |
| Perioperative TEE Review Course | UCSD, San Diego, CA | 3 | | 980 | TEE focused, workshops and didactics | <http://anes-som.ucsd.edu/Echo/> |
| Critical Care Ultrasound | SCCM, Chicago, IL | 2 | | 1,590 | TTE, vascular ultrasound focused, FATE, skills stations: TEE not mentioned | [www.sccm.org](http://www.sccm.org) |
| Advanced Critical Care Ultrasound | SCCM, Chicago, IL | 1 | | 995 | Advanced TTE hemodynamics and measurements: TEE not mentioned | [www.sccm.org](http://www.sccm.org) |
| Critical Care Ultrasound Course | The Emergency Ultrasound, 3rd Rock Ultrasound, Las Vegas, NV | 2 | | 967 | Vascular, lung and abdominal ultrasound focused: TEE not mentioned | [www.emergencyultrasound.com](http://www.emergencyultrasound.com) |
| Advanced Ultrasound Course | The Emergency Ultrasound, 3rd Rock Ultrasound, Las Vegas, NV | 1 | | 557 | Cardiac and non-cardiac applications, ocular and lung included: TEE not mentioned | [www.emergencyultrasound.com](http://www.emergencyultrasound.com) |
| Critical Care Ultrasonography Course | Johns Hopkins, Baltimore, MD | 2 | | 1,400 | Comprehensive critical care course, didactics, workshops and cases including cardiac assessment; TEE not mentioned | [www.hopkinscme.edu](http://www.hopkinscme.edu) |
| Ultrasonography for intensivists and emergency physicians | Harvard Medical School, Boston, MA | 3 | | 1,950 | Includes didactics, workshops and cases; cardiac and vascular assessment; TEE not mentioned | <http://www.hms-cme.net/3424369/> |
| Emergency and Critical Care Ultrasound Course | Mt. Sinai School of Medicine, New York, NY | 1 | | 450 | FAST, FOCUS exams, vascular access: TEE not mentioned | <http://icahn.mssm.edu/education/> |
| **Preceptorships/On-Site courses** | | | | | | |
| Intraoperative TEE Preceptorship | Duke University, Durham, NC | | 3 | 4,500 | TEE-focused, no clinical hands-on, limited to 2 participants, simulation and live case-based instruction. | <http://anesthesiology.duke.edu/?page_id=13186> |
| Training in Perioperative TEE | Beth Israel Deaconess Medical Center, Boston, MA | | 5 | 4,000 | TEE-focused, no clinical hands-on, simulation and live case-based instruction. | <http://www.cme.med.harvard.edu/courses/perioperative> |
| Perioperative and Critical Care Echo Training Course | University of Nebraska, Omaha, NE | | 6 | 10,000 | TEE and TTE instruction, simulation, didactics, workshops, case-based and boards review. Two 3-day onsite sessions | [www.unmc.edu/anesthesia/Echo\_Basic.htm](http://www.unmc.edu/anesthesia/Echo_Basic.htm) |
| Perioperative Echo Fellowship | University of Utah, Salt Lake City, UT | | 1 year | Not mentioned | Complete onsite one-year fellowship in TTE and TEE | <http://medicine.utah.edu/anesthesiology/education/periopecho-fellowship.php> |
| UCLA Advanced TEE training Program | UCLA, Los Angeles, CA | | January to May | 4000-8,000/month | Hands-on in operating room, TEE focused, supervised. | <http://www.anes.ucla.edu/uclaadvancedtransesophageal.php> |
| **Online Courses** | | | | | | |
| HeartWeb Courses | University of Melbourne, Australia | | Self-paced (1 year) | 1,820 per subject | 4-12 subjects required; distance learning; from certificate course to masters in ultrasound | [www.heartweb.com/au](http://www.heartweb.com/au) |
| A Complete Introduction to TEE | Heartworks, UK | | Self-paced | 379 | TEE-focused. Study modules and self-assessment available | <http://learn.heartworks.me.uk/> |
| Online Clinical Ultrasound and Echo Course (On-Cue) | SCA, Chicago, IL | | Self-paced | 4,800-6,500 | Level 1, 2 and Fast Track courses; from basic concepts to advanced instruction, case studies, interpretation | <http://www.heartweb.com/courses/On-CUE/> |
| ASA/SCA Basic Perioperative TEE Education Program | ASA ansd SCA | | Self-paced | 1,600 | Offered via Heartweb platform; 100 cases discussed; TEE focused; valid towards CME requirements for NBE basic TEE certification pathway | <http://www.heartwebs.com/basic-tee/> |
| The Echocardiography Masterclass | 123sonography.com and Medical University of Vienna | | 180 day acess | Not indicatedc | Premium membership @ $24/month; features online lectures and video atlas; TTE focused | [www.123sonography.com](http://www.123sonography.com) |

***Footnotes:***

Several institutions offer smaller courses relating to vascular access and regional ultrasound.

a. Some commercial entities offer onsite training at user’s institution related to sale of ultrasound products (examples: CAE Healthcare, Sonosite Inc, GE Healthcare, Philips Inc)

b. Several courses are offered at discounted rates for special groups such as members of societies or for trainees.

c. Not indicated at time of writing; registration full

*Abbreviations:*

ASA = American Society of Anesthesiologists; SCA = Society of Cardiovascular Anesthesiologists; NBE = National Board of Echocardiography; TTE = transthoracic echocardiography; TEE = transesophageal echocardiography