This program features a morning symposium and an afternoon hands-on workshop with a variety of devices. Anesthesiology residents and Fellows, anesthesia providers (including CRNAs, AAs, ARNPs and Physician Assistants), anesthesiology staff and faculty, cardiac surgeons, perfusionists, nurse specialists and other physicians desiring an update on mechanical circulatory support devices should attend.

**Course Director:** Yong G. Peng, MD, PhD, FASE  
**Co-Directors:** Gregory M. Janelle MD, FASE  Andrew Pitkin, MD; Cindy Le, MD  
**Course Faculty Members:** Ettore Crimi, MD; Charles Klodell, MD; Brit Smith, MD; Kent Berg, MD MBA; Mark Martin CP

**Learning Objectives**

After participation in this activity, participants should be able to:

- Describe the fundamental principles of a variety of mechanical circulatory support devices;
- Describe the best method for safe interrogation and perioperative reprogramming of permanent pacemakers and defibrillators;
- Identify the potential mechanical faults of intra-aortic balloon pumps, left ventricular assist devices and extracorporeal membrane oxygenation circuits;
- Describe the basic knowledge and skills of perioperative TEE/TTE exam, lung ultrasound to assist intraoperative diagnosis for critical ill patients.