

CABMET 2023 Class Descriptions

Class 1: Medical Network (IEC 80001-1:2021) – Rob Arian, UC Health

Application of risk management for IT-networks incorporating medical devices — Safety, effectiveness and security in the implementation and use of connected medical devices or connected health software.

CLASS 2 (2-hour): Introduction to Servicing Radiographic and Fluoroscopic Imaging Systems – Dave Domanski, RSTI

This session is designed for Biomedics, Managers, and Students. This session will explore the systems and technology found in most medical imaging departments. From the introduction of the basic X-Ray system to more complex imaging equipment, attendees will become familiar with the terminology, major components and the overall functionality of these systems and their major sub-systems.

CLASS 3: Basic Review of Data Cybersecurity: Cryptography – Logan Zeien, CABMET

This class covers fundamental data security principles through basic Cryptographic primitives (SKES, ASKES, Hashes, MAC, SIG), and some applications of each.

CLASS 4: Mobilize Solution: Wireless, Paperless, Synchronized, Automated PM Testing – Julio Castro, Pronk

The course will discuss and demonstrate new technologies available to create and run your PM procedures electronically utilizing wireless connectivity from test equipment. Learn how to automate, streamline and capture a detailed electronic report of all your service work. See how to easily archive/transfer that information to a wide range of databases to reduce the administrative overhead that biomedical engineers face today.

CLASS 6: Future Tech: Medical Technology of the Future – David Scott, UCHealth and Rob Arian, UCHealth

Learn the evolution of technology where it could change the way we provide care and how this could impact the HTM work force

CLASS 7: Mechanical Ventilation 101 – Tammi Keeton, Hamilton Medical

Introduction to mechanical ventilation using the Hamilton T1 Portable Transport Ventilator. Demonstration of ventilator function and operation covering how monitoring data is measured and used. Q&A following if time permits.

CLASS 8: The New Generation of Asset Tracking – Bill Haughton, Cognosos

Join Cognosos' discussion on the transition from the bulky, problematic RTLS systems that once dominated the market to the lightweight, wireless versions in service today. The new generation of RTLS are less complicated and much less expensive to install, provide room level tracking without room level hardware, and finally deliver on the promise of a hard-dollar driven ROI. We will examine the key components to building a strong finance-driven RTLS business case and the larger impact increasing equipment visibility delivers to your facility.

CLASS 9: Career Development: Becoming Marketable and Focused – Brenna Rauen, GE

Career paths, marketing yourself, and picking your lane.

Class 10: Is the Medical Device Really Ready to Go Back to the Clinical Department? – Julio Castro, Pronk Attendees will have a chance to review examples of actual medical device testing requirements and compare them to test equipment specifications to ensure there is sufficient accuracy. Through this comparison attendees will learn how to determine if the test equipment actually meets the manufacturer's requirements, and if not, how much error could be introduced into your testing.

CLASS 12: Ultrasound Basics 101 – Matt Tomory, Innovatus Imaging

Ultrasound basics will cover the technology, theory and essentials of ultrasound technology.

CLASS 13: Right to Repair: The Latest on Medical Device Repair – Nathan Proctor, U.S. PIRG

Status of right to repair legislation as applicable to medical device industry.

CLASS 14: Radiation Safety: Personal Radiation Dosimeters, Regulatory Topics, and Common Points of Confusion in Medical Imaging – Nathan Busse, Colorado Associates in Medical Physics

Rules and recommendations around personal radiation dosimeters and radiation safety best practices, regulatory requirements for equipment producing ionizing radiation (including modality specifics for CT and mammography), and other common points of confusion from the perspective of a Medical Physicist. Will include time for radiation and regulatory Q and A.

CLASS 15: SafeTEE PMIs: Demonstrating TEE Probe Preventive Maintenance Inspections – Matt Tomory, Innovatus Imaging

Do you support diagnostic ultrasound? Then you know that probes are one of the highest failure items and the largest contributors to service spending. You also know the value of preventive maintenance. Have you ever considered performing a preventive maintenance inspection (PMI) on a TEE probe? How do TEE probes wear? What's important to check? This session is designed to raise your comfort level and technical competence with these seemingly intimidating probes. Become the TEE expert in your facility!

Class 16: Fundamentals of Testing Infusion Devices – Julio Castro, Pronk

Infusion pumps have come under greater scrutiny due to an increase in patient incidents. This presentation provides an overview of the various infusion pump technologies available in the market, safety concerns raised by the US Food and Drug Administration (FDA) and provides maintenance and troubleshooting advice to improve the safety and effectiveness of these devices.

CLASS 17: MRI Coils: Failure Analysis and Strategies to Minimize Support Costs – Matt Tomory, Innovatus Imaging

MRI coil failures can significantly impact revenue due to cancelled and delayed patient scans. Although mostly supported through service contracts, most preventable damage is covered out-of-pocket, versus on-contract. This session provides an overview of frequent coil failures based on 2-years of failure analysis data from Innovatus' knowledgebase. Through root cause analysis, attendees will be able to determine best practices for troubleshooting commonly encountered coil problems and develop a strategy to reduce support costs and downtime.

CLASS 18 (2-hour): Introduction to DICOM-PACS for Imaging Service Engineers – Dave Domanski, RSTI

This session is designed for Biomed, Imaging Engineers, Managers, and Students. This session will explain fundamental concepts of hospital networks, TCP/IP, and DICOM communication. Fundamentals covered in this course can be used for basic network problem solving, DICOM device setup & configuration, as well as advanced DICOM troubleshooting concepts using DICOM emulators to help eliminate "finger pointing" issues that arise in medical imaging networks.

Class 19 (2-hour): Efficiency Through Automation and Multi-Device Integration of Biomedical Test Equipment – Dave Heiselt, QRS-Solutions

Learn the benefits of automated and semi-automated device testing.

Class 20: Using Your AAMI Certification to Advance Your Career – David Scott, UCHealth and Brian Wilson, GE

Benefits of and opportunities unlocked by AAMI certification.

Class 23: Transitioning from Biomed to Imaging – Brian Wilson (GE)

Development tips for moving from a biomed role to an imaging role.

CLASS 24: Ultrasound Applications and Image Artifacts for Service Engineers – Matt Tomory, Innovatus Imaging

Knowledge of ultrasound system modes, functions and terminology are a huge part of performing proper ultrasound system service; however, this information is not taught in our industry—until now. This class will illustrate all of the various ultrasound imaging modes and functions of an ultrasound system. Image artifacts and noise troubleshooting will also be discussed. This class will teach soft skills to complement the hard technical skills possessed by ultrasound service personnel.

Class 25: NIBP Fundamentals and Troubleshooting – Julio Castro, Pronk

This 60-minute presentation will discuss the background on different methods of measuring blood pressure with an emphasis on Non-Invasive Blood Pressure (NIBP) measurements. The presentation will include the history of the parameter, design principles including hardware, software and measurement techniques. We will also discuss what can affect the accuracy of the readings including some great tips when troubleshooting and servicing vital sign monitors configured for NIBP.

CLASS 26: Wearable Medical Technology: What does it mean for BMETs? – David Scott, UC Health

Wearable medical technology is the future of medical equipment. How will it affect our jobs as BMETs? What will it mean to hospital systems? How can it be used to have a healthier patient population? These questions will be answered in this presentation. Find out what the future holds.

CLASS 27: Basic Ventilation Using the Puritan Bennett 840 Ventilator – Garrett Breistig, Med One Group

Basic hands-on demonstration of ventilation for those who are new to ventilators or new to the Puritan Bennett 840.

KEYNOTE ADDRESS: The Rules of Repair – Justin Barbour, A Better Biomed

The Rules of Repair are a compilation of good practices and sayings which have been passed on for generations through the skilled repair trades. We'll discuss how following these simple rules dramatically improve any clinical engineering program while setting technicians up with ethics for sure success in any repair career.