

GE Healthcare

Education Services

Diagnostic Cardiology

2011 Technical Education



imagination at work

Instructor-Led Courses

CASE® with CardioSoft® software	1
MAC® 1200	2
MARS® PC	3
MARS® v8	4
Morpheus HX Virtual Sleep Lab (VSL)	5
MUSE® 5D/5E	6
MUSE® 7	7

Self-Paced Courses

Basic ECG Technology	8
Basic Hemodynamics Technology	9
MAC® 5500	10

Healthcare IT Courses

Essentials of Healthcare IT SM	11
Securing the Healthcare IT Environment SM	12
Wireless in the Healthcare IT Environment SM	13
Essentials of HL7®	14
Essentials of DICOM®	15

Technical Education

Education Centers

Waukesha, WI - The Healthcare Institute has expanded to include classrooms to support anesthesia classes and our new Healthcare IT curriculum.

Madison, WI - Our original center of learning for life support device education now includes our new Healthcare IT curriculum.

Jupiter, FL - Our center of excellence for patient monitoring product support now includes new classrooms featuring our new Healthcare IT curriculum and many GE product training classes.

Remote Locations - Periodically, we take classes to strategic locations for added customer convenience. Check our website for the most current list of classes www.gehealthcare.com/training.

Hosting a Class - If you have a group to train, consider hosting a class at your facility. Our instructors can bring a number of our courses to you for maximum flexibility and convenience. You eliminate travel expense and have the advantage of training multiple staff at the same time, which can reinforce learning.

GE Health and Safety Policy

GE Healthcare requires students to wear closed-toe and closed-heel shoes while attending training. Safety toe-shoes are required, but steel-toe shoe covers are available in the classroom. Open-toe, high-heel shoes or sandals are not permitted.

About Technical Education from GE Healthcare

GE Healthcare Education Services delivers technical education for Diagnostic Imaging, Ultrasound, Monitoring, Diagnostic Cardiology, Infant Care and Anesthesia Delivery Systems and Respiratory products. We also offer a curriculum of Healthcare IT classes focused specifically on the needs of today's biomedical and technical professionals.

Our goal is to be recognized as the global leader in healthcare education solutions.

- Building customer knowledge and competencies through a diverse educational portfolio in an increasingly complex healthcare environment.
- Striving to exceed customer expectations by delivering exceptional quality education that is clinically relevant and has a measurable impact on practice.
- Be a provider of choice for Healthcare IT education regardless of medical equipment choices, previous learning or experience.

Added value for your education investment

College credit is available for many of our classes, both technical and Healthcare IT, through the University of Phoenix and DeVry University. If you are working toward a degree, or contemplating one, these classes may bring you closer to completion. Visit www.gehealthcare.com/training and choose "College Credit for Technical Training" for more information on these programs.

For your convenience, we now have one number to call for information on any course.

1-888-799-9921

Student Information

Registration Instructions

Registration is online. Go to www.gehealthcare.com/training and choose the appropriate category for course schedules and registration link. Select your course and complete all information. Print a copy for your files before submitting. When done, click on Save and Submit to send registration form to a Training Coordinator.

Students enrolling in Diagnostic Cardiology technical classes are required to submit the Technical Agreement & Employment Verification Form located on the electronic form. Print a copy of the form, complete and sign. Fax signed form to 1-262-546-0997.

Confirmation of enrollment is sent via e-mail from CorpMyLearning within 2 business days.

Policies and Terms

- Accepted via email or phone: 888-799-9921 or edservices@ge.com
- Must be received 15 business days prior to the course start date
- A \$1,000 per week "no-show" or cancellation fee will be incurred if a student does not show up for class or does not cancel before the 15 business day window
- GE reserves the right to cancel or reschedule any class. GE will not be held responsible for any travel costs incurred due to causes beyond our control, such as, but not limited to, hurricanes, tornados, or strikes

Attendance

- Students are required to arrive on time for class.
- Class start and end times vary. Please refer to your e-mail enrollment notification.
- A "no-show" is not eligible for tuition reimbursement.
- Students must pass an assessment to receive certificate of successful completion.

Cancellations

- Must be received 15 business days prior to the scheduled start date.
- Accepted via e-mail or phone.
- Fee of 50% will be charged of total tuition for cancellations less than 15 days of the scheduled class date.

Low Enrollment

GE Healthcare reserves the right to cancel classes due to low enrollment. Classes with low enrollment 15 business days prior to the scheduled date will be cancelled. Please consider this when booking your travel.

When GE Healthcare cancels a class, tuition will be refunded in full. Alternatively, tuition may be applied to the cost of another class scheduled to take place within 12 months of the original class.

GE Healthcare will not be held responsible for any travel costs incurred due to circumstances beyond our control, such as, but not limited to, hurricanes, tornados, or labor strikes.

Many classes contain lecture and lab exercises requiring networking skills. The fundamentals of networking are not covered in products classes.

IT Pre-requisites

The following IT skills are required prior to enrollment.*

IP Addressing
Switch Troubleshooting
Troubleshooting Wireless Networks
Subnetting
Router Configuration
Network Connectivity
Hard Drives
Access Control Lists
Communication Paths
Hardware Replacement
Router Troubleshooting
Network Troubleshooting
Hubs
POST
Back-up Systems
Switch Port Configuration
Access Point Configuration

* Courses requiring Healthcare IT competency are identified on the course description page

Accepted demonstration of Healthcare IT competency:

- CompTIA Network+®, Microsoft MCP®, or Cisco CCNA® certification
- Essentials of Healthcare ITSM
- Participants may complete a test to demonstrate IT competencies required for specific courses.

CASE® with CardioSoft® software

This course is an overview of the CASE unit with CardioSoft and peripherals, illustrating the practical skills needed to configure and troubleshoot the system. Participants are involved in basic clinical software navigation and the comprehension of software configuration and service tools on the T2100 series treadmills. Participants are shown how to configure a CASE unit to send reports to a MUSE® system, and how to integrate standalone CASE units into a network environment with CardioSoft clients and CardioSoft. The course provides a detailed explanation of the individual hardware and software components, their integration and interconnectivity with other system components. Participants learn hands-on skills in labs designed to reinforce principles reviewed in class.



Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers

Customer Requirements

Customers are required to bring a computer laptop to class. The laptop will be used to view electronic documentation and operate software service tools, which are provided during class.

Computer Laptop Requirements:

- Hardware: PC based (not Mac®), Wireless Network Card, DB 9 Serial port, CD ROM, USB port, AC Power Cord
- Operating System: Microsoft Windows® 2000 or XP Professional only
- Software: Microsoft Internet Explorer ver. 5.5 or greater, Microsoft Windows Media Player® 10 or greater, Adobe Reader® (latest version), latest Adobe Flash® plug-ins, HyperTerminal or other terminal emulation program.
- Local administrator access
- Ability to disable spyware and virus scan programs
- No other versions of Ghost previously installed

Purchase Packages:

Tuition:

BT1068-001 \$6,395

Tuition & lodging:

BT1068-005 \$7,135

Tuition, lodging & air:

BT1068-010 \$8,030*

* US Only

Delivery Method: Classroom

Length of Course: 4 days

Course Location:

Please visit www.gehealthcare.com/training for the most current information on dates and locations.

Required IT Skills:

- GE Essentials of Healthcare IT

For list of core IT skills, see chart on the Student Information page.

MAC® 1200

Instructor-led, web-based training for biomedical engineers. Introduces features, components, software and options for the MAC 1200. Provides information needed to perform system setups, configuration, conduct diagnostic tests and replace components.

Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers

Customer Requirements

- Must be able to connect to the internet
- Phone access (preferably speaker phone)



Tuition:
2020786-056 \$2,875

Delivery Method: Classroom/web

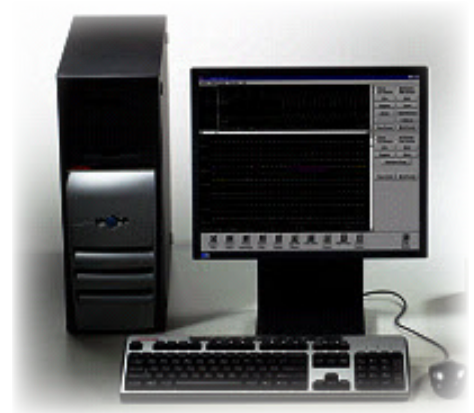
Length of Course: 2 days

Course Details:
This class is delivered upon request only. Call 1-888-799-9921 to schedule this course.

Remote instructor-led class is conducted via teleconference and the Internet. Students view the class material online and have interactive lecture time. Customers must have MAC 1200 available for class exercises.

MARS® PC

The course provides an understanding of the MARS PC Server, Workstation and peripherals, illustrating the practical skills needed to configure and troubleshoot the system. Participants are involved in clinical software navigation and the comprehension of software configuration and service tools. The course provides a detailed explanation of the individual hardware and software components and their integration and interconnectivity with other system components. Participants learn hands-on skills in labs designed to reinforce principles reviewed in class.



Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers

Customer Requirements

- Must be able to connect to the internet
- Phone access (preferably speaker phone)
- Hospital IT staff

Purchase Packages:

Tuition:

BT1031-100 \$3,045

Tuition & lodging:

BT1031-101 \$3,415

Tuition, lodging & air:

BT1031-102 \$4,310*

* US Only

Delivery Method: Classroom

Length of Course: 2 days

Course Location:

Please visit www.gehealthcare.com/training for the most current information on dates and locations.

Required IT Skills:

- GE Essentials of Healthcare IT or equivalent

For list of core IT skills, see chart on the Student Information page.

MARS® v8

MARS v8 service class describes the software and hardware differences between the current MARS PC 7.x and 8.0 release. The material presented assumes existing MARS PC product knowledge and is intended for FEs servicing and installing the MARS PC product. The course provides a detailed explanation of the new individual hardware and software components, their integration and interconnectivity with other system components. Participants learn hands-on skills in labs designed to reinforce principles reviewed in class.

Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers

Customer Requirements

Customers are required to bring a computer laptop to class. The laptop will be used to view electronic documentation and operate software service tools, which are provided during class.

Computer Laptop Requirements:

- Hardware: PC based (not Mac®), Wireless Network Card, DB 9 Serial port, CD ROM, USB port, AC Power Cord
- Operating System: Microsoft Windows® 2000 or XP Professional only
- Software: Microsoft Internet Explorer ver. 5.5 or greater, Microsoft Windows Media Player® 10 or greater, Adobe Reader® (latest version), latest Adobe Flash® plug-ins, HyperTerminal or other terminal emulation program.
- Local administrator access
- Ability to disable spyware and virus scan programs
- No other versions of Ghost previously installed



Purchase Packages:

Tuition:

2020786-230 \$5,895

Tuition & lodging:

2020786-225 \$6,450

Tuition, lodging & air:

2020786-226 \$7,345*

* US Only

Delivery Method: Classroom

Length of Course: 3 days

Course Location:

Please visit www.gehealthcare.com/training for the most current information on dates and locations.

Required IT Skills:

- GE Essentials of Healthcare IT or equivalent

Addition pre-requisite:

- MARS PC Technical Training or equivalent

For list of core IT skills, see chart on the Student Information page.

Morpheus HX Virtual Sleep Lab (VSL)

Mars v8 Morpheus HX is a One-day instructor led course. This course assumes that the learner has completed the MARS v8 Technical course. Morpheus HX builds on the MARS v8 functions to implement basic configuration and function of the Morpheus sleep analysis software for MARS v8. Price includes tuition only. Nonrefundable. Must be redeemed within 18 mos. of purchase. Training purchased individually or with equipment for use by direct hospital employees only.

Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers

Customer Requirements

Customers are required to bring a computer laptop to class. The laptop will be used to view electronic documentation and operate software service tools, which are provided during class.

Computer Laptop Requirements:

- Hardware: PC based (not Mac®), Wireless Network Card, DB 9 Serial port, CD ROM, USB port, AC Power Cord
- Operating System: Microsoft Windows® 2000 or XP Professional only
- Software: Microsoft Internet Explorer ver. 5.5 or greater, Microsoft Windows Media Player® 10 or greater, Adobe Reader® (latest version), latest Adobe Flash® plug-ins, HyperTerminal or other terminal emulation program.
- Local administrator access
- Ability to disable spyware and virus scan programs
- No other versions of Ghost previously installed



Purchase Packages:

Tuition:

2020786-227 \$1,895

Tuition & lodging:

2020786-228 \$2,080

Tuition, lodging & air:

2020786-229 \$2,975*

* US Only

Delivery Method: Classroom

Length of Course: 1 day

Course Location:

Please visit www.gehealthcare.com/training for the most current information on dates and locations.

Required IT Skills:

- GE Essentials of Healthcare IT or equivalent

Addition pre-requisite:

- MARS v8

For list of core IT skills, see chart on the Student Information page.

MUSE® 5D/5E ECG Management System

The MUSE 5D/5E technical ECG management system course provides in depth knowledge on the MUSE 5D/5E client workstation, MUSE servers and interconnectivity with MAC carts, CASE units, MARS PC and patient monitors and focusing on the Dash® monitor. This hands-on course explores the function and interconnectivity of the system and gives you the practical skills needed for system setup and troubleshooting. Whether you are a biomedical engineer, IT professional or system administrator, you will benefit from hands-on labs, supported by instruction-based learning.

Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers

Customer Requirements

Customers are required to bring a computer laptop to class. The laptop will be used to view electronic documentation and operate software service tools, which are provided during class.

Computer Laptop Requirements:

- Hardware: PC based (not Mac®), Wireless Network Card, DB 9 Serial port, CD ROM, USB port, AC Power Cord
- Operating System: Microsoft Windows® 2000 or XP Professional only
- Software: Microsoft Internet Explorer ver. 5.5 or greater, Microsoft Windows Media Player® 10 or greater, Adobe Reader® (latest version), latest Adobe Flash® plug-ins, HyperTerminal or other terminal emulation program.
- Local administrator access
- Ability to disable spyware and virus scan programs
- No other versions of Ghost previously installed



Purchase Packages:

Tuition:

BT1018C-001 \$7,645

Tuition & lodging:

BT1018C-005 \$8,570

Tuition, lodging & air:

BT1018C-010 \$9,465*

* US Only

Delivery Method: Classroom

Length of Course: 5 days

Course Location:

Please visit www.gehealthcare.com/training for the most current information on dates and locations.

Required IT Skills:

- GE Essentials of Healthcare IT or equivalent

For list of core IT skills, see chart on the Student Information page.

MUSE® 7 ECG Management System

The MUSE 7 ECG management system course provides in depth knowledge on the MUSE 7 client workstations, MUSE servers and interconnectivity with MAC carts, CASE units, MARS® PC and patient monitors, focusing on the Dash monitor. This hands-on course explores the function and interconnectivity of the system and gives you the practical skills needed for system set-up and troubleshooting, including the MUSE CV Web option. Whether you are a biomedical engineer, IT professional or system administrator, you will benefit from hands-on labs, supported by instruction-based learning.

Intended Audience

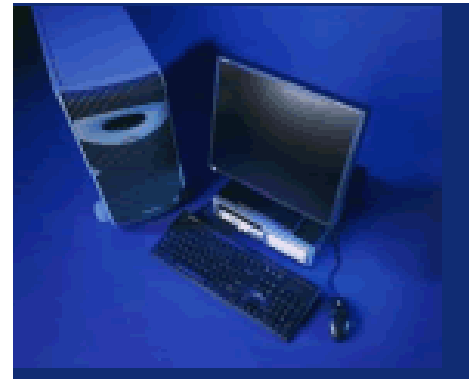
- Biomedical equipment technicians
- Biomedical and clinical engineers

Customer Requirements

Customers are required to bring a computer laptop to class. The laptop will be used to view electronic documentation and operate software service tools, which are provided during class.

Computer Laptop Requirements:

- Hardware: PC based (not Mac®), Wireless Network Card, DB 9 Serial port, CD ROM, USB port, AC Power Cord
- Operating System: Microsoft Windows® 2000 or XP Professional only
- Software: Microsoft Internet Explorer ver. 5.5 or greater, Microsoft Windows Media Player® 10 or greater, Adobe Reader® (latest version), latest Adobe Flash® plug-ins, HyperTerminal or other terminal emulation program.
- Local administrator access
- Ability to disable spyware and virus scan programs
- No other versions of Ghost previously installed



Purchase Packages:

Tuition:

2020786-042 \$12,145

Tuition & lodging:

2020786-043 \$13,855

Tuition, lodging & air:

2020786-044 \$14,750*

* US Only

Delivery Method: Classroom

Length of Course: 8 days

Course Location:

Please visit www.gehealthcare.com/training for the most current information on dates and locations.

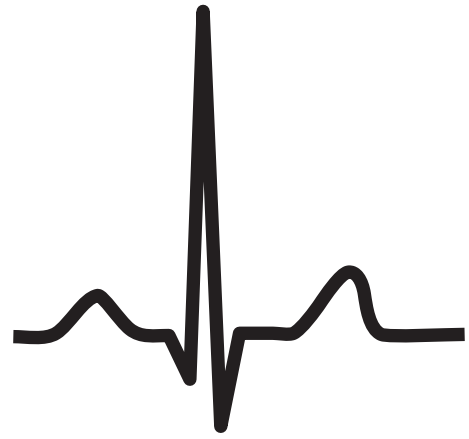
Required IT Skills:

- GE Essentials of Healthcare IT or equivalent

For list of core IT skills, see chart on the Student Information page.

Basic ECG Technology

The Basic ECG self-paced course is designed to give biomedical or clinical engineers and biomedical technicians a solid foundation in the theory and application of ECG technology. You will learn how the ECG measures electrical impulses generated by the heart and how ECG technology is used by healthcare professionals. Components include introduction to anatomy and physiology of the heart, basic electrocardiography, the normal ECG waveform, and supraventricular and ventricular abnormalities of the ECG waveform.



Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers

Customer Requirements

A computer, or computer access with CD ROM drive required to use this CD course.

Computer Requirements:

- Hardware: PC based (not Mac®), Wireless Network Card, DB 9 Serial port, CD ROM drive
- Operating System: Microsoft Windows® 2000 or XP Professional only
- Software: Microsoft Internet Explorer ver. 5.5 or greater, Microsoft Windows Media Player® 10 or greater, Adobe Reader® (latest version), latest Adobe Flash® plug-ins, HyperTerminal or other terminal emulation program.

Tuition:

CD-1144

\$100

Delivery Method: CD

Length of Course:

Dependant on user

Basic Hemodynamics Technology

The Basic Hemodynamics self-paced course is designed for biomedical or clinical engineers and biomedical technicians. You will gain a solid foundation in the theory and application of hemodynamic monitoring technology. The course demonstrates how blood pressure is measured within the circulatory system and how hemodynamic monitoring technology is used by healthcare professionals. Components include structures and functions of the human heart as they relate to blood flow, the effect of pressure on blood flow, and direct and indirect (invasive and non-invasive) blood pressure monitoring.

Intended Audience

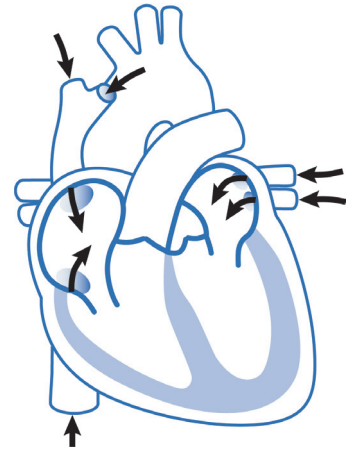
- Biomedical equipment technicians
- Biomedical and clinical engineers

Customer Requirements

A computer, or computer access with CD ROM drive required to use this CD course.

Computer Requirements:

- Hardware: PC based (not Mac®), Wireless Network Card, DB 9 Serial port, CD ROM drive
- Operating System: Microsoft Windows® 2000 or XP Professional only
- Software: Microsoft Internet Explorer ver. 5.5 or greater, Microsoft Windows Media Player® 10 or greater, Adobe Reader® (latest version), latest Adobe Flash® plug-ins, HyperTerminal or other terminal emulation program.

**Tuition:**

CD-1143

\$100

Delivery Method: CD**Length of Course:**

Dependant on user

MAC® 5500 Resting ECG System

This self-paced course introduces biomedical or clinical engineers and technicians to the features, components, software, and options for the MAC 5500 ECG system. Upon completion of the course the student will be able to perform basic system setups, conduct diagnostic tests, disassemble the unit and replace all serviceable components. An assessment test is included at the end of the course materials.

Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers

Customer Requirements

A computer, or computer access with CD ROM drive required to use this CD course.

Computer Requirements:

- Hardware: PC based (not Mac®), Wireless Network Card, DB 9 Serial port, CD ROM drive
- Operating System: Microsoft Windows® 2000 or XP Professional only
- Software: Microsoft Internet Explorer ver. 5.5 or greater, Microsoft Windows Media Player® 10 or greater, Adobe Reader® (latest version), latest Adobe Flash® plug-ins, HyperTerminal or other terminal emulation program.



Tuition:

2020786-015 \$400

Delivery Method: CD

Length of Course: 3 hours

Essentials of Healthcare ITSM

This instructor-led class is specifically designed for technical professionals responsible for the installation and support of medical devices and the networks interconnecting them. The class is taught by highly qualified technical trainers and will focus on developing the practical skills needed by a biomedical engineer to interface with networked devices in healthcare today. Extensive labs with plenty of hands-on time allows the student with no previous IT training to gain confidence in this new and exciting arena. The class will build and troubleshoot flat, switched, routed, and wireless networks. Basic computer skills are required.



Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers
- Biomedical and clinical engineering managers
- Medical technology managers
- Hospital IT staff
- Any professional who supports the field of medical technology

Purchase Packages:

Tuition:

2030677-001 \$3,850

Tuition & lodging:

2030677-002 \$4,775

Tuition, lodging & air:

2030677-003 \$5,670*

* US Only

Delivery Method: Classroom

Length of Course: 5 days

Course Location:

Please visit www.gehealthcare.com/training for the most current information on dates and locations.

Wireless in the Healthcare IT EnvironmentSM

This vendor-neutral class focuses on the installation, management, and troubleshooting of RF technologies in healthcare today; including WMTS, 802.11, RFID, and cellular communications. Topics include RF and antenna basics, common interference sources in healthcare, remote patient viewing using the Wireless Medical Telemetry Service (WMTS), 802.11 and access point configuration including wireless VLANs, RFID basics, cellular communications, and security requirements for wireless systems. Students receive hands-on training with network analyzers and spectrum analyzers, perform site surveys for WMTS and 802.11, and troubleshoot WMTS antenna systems.



Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers
- Biomedical and clinical engineering managers
- Medical technology managers
- Hospital IT staff
- Any professional who supports the field of medical technology

Purchase Packages:

Tuition:

2020786-050 \$5,000

Tuition & lodging:

2020786-051 \$5,925

Tuition, lodging & air:

2020786-052 \$6,820*

* US Only

Delivery Method: Classroom

Length of Course: 5 days

Course Location:

Please visit www.gehealthcare.com/training for the most current information on dates and locations.

Required IT Skills:

- GE Essentials of Healthcare IT or equivalent

For list of core IT skills, see chart on the Student Information page.

Essentials of HL7®

This vendor-neutral class prepares the student to configure and troubleshoot HL7. Focusing on V2.x, students will learn to use the HL7 standard as a reference source as well as vendor conformance documents to aid in interface design. Topics include the structure and encoding of common patient administration, order, results, and billing messages, as well as interface design, data mapping, and vocabulary. Common troubleshooting techniques will be discussed and class concepts will be reinforced through use of the HL7 Messaging Workbench software. This instructor-led course is open to anyone wanting a more in-depth insight into HL7, regardless of equipment choice in the healthcare environment.



Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers
- Biomedical and clinical engineering managers
- Medical technology managers
- Hospital IT staff
- Any professional who supports the field of medical technology

Purchase Packages:

Tuition:

2020786-167 \$2,350

Tuition & lodging:

2020786-168 \$2,905

Tuition, lodging & air:

2020786-169 \$3,800*

* US Only

Delivery Method: Classroom

Length of Course: 3 days

Course Location:

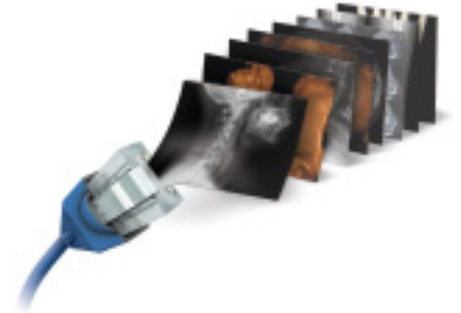
Please visit www.gehealthcare.com/training for the most current information on dates and locations.

Essentials of DICOM®

This instructor-led course prepares the participant to become proficient in the installation, maintenance and troubleshooting of DICOM on digital imaging networks. Participants will learn to use the DICOM standard as a reference source, analyze conformance statements for predicting connectivity, configure and use DICOM simulators, and capture and analyze DICOM traffic using freeware tools like the DICOM Validation Toolkit.

Intended Audience

- Biomedical equipment technicians
- Biomedical and clinical engineers
- Biomedical and clinical engineering managers
- Medical technology managers
- Hospital IT staff
- Radiologists
- Any professional who supports the field of medical technology



Purchase Packages:

Tuition:

2020786-126 \$3,500

Tuition & lodging:

2020786-127 \$4,055

Tuition, lodging & air:

2020786-128 \$4,950*

* US Only

Delivery Method: Classroom

Length of Course: 3 days

Course Location:

Please visit www.gehealthcare.com/training for the most current information on dates and locations.

Required IT Skills:

- GE Essentials of Healthcare IT or equivalent

For list of core IT skills, see chart on the Student Information page.

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HL7 is a registered trademark of Health Level Seven (HL7) Inc., the non-profit standards developing organization that is accredited by the American National Standards Institute, (ANSI).

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GE Medical Systems Information Technologies, Inc., a General Electric company doing business as GE Healthcare.

GE Healthcare
N16 W22419 Watertown Road
Waukesha, WI 53186
U.S.A.
www.gehealthcare.com

