

GE Healthcare

Education Services

# Computed Tomography

2011 Technical Education



imagination at work

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# Technical Service Training Tailored to Fit Your Needs!

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## Education Centers

**Waukesha, WI** - The GE Healthcare Institute is a state of the art facility providing a dedicated learning environment with over 210,000 square feet of learning space including 75 labs and 25 classrooms.

**Blended Curriculum** - Our technical service training offers a blended curriculum with web-based and in-resident courses. Our integrated training platform minimizes the time you spend away from home.

- **Web-based Courses**

Introductory, pre-requisite, and some differences courses are available for independent study.

- **In-Resident Courses**

(Classroom/Lab) Advanced courses held at the GE Healthcare Institute provide invaluable and practical hands-on training taught by industry-leading instructors.

**Differences Courses** - Tailored specifically for those who have previous training on GE Diagnostic Imaging Equipment and designed to bring you up to speed on the latest technology and equipment.

### 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, Computed Tomography, Magnetic Resonance, Mammography, Nuclear Medicine/PET, 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.

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## 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](http://www.gehealthcare.com/training) and choose "College Credit for Technical Training" for more information on these programs.

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Contact our registrar for more information.  
[EdServices@ge.com](mailto:EdServices@ge.com)  
or 1-888-799-9921 press option 2

## Registration Instructions

To download the Registration form, go to [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, select Diagnostic Imaging: GE). Click on the "Register" button and download the Service Training Application Form (pdf). After completing this form, fax to: 262-574-8627, Attn: Registrar, GE Technical Service Training. Or e-mail to: [EdServices@ge.com](mailto:EdServices@ge.com)

After your application form is received/approved, the Registrar will contact the student to confirm dates, course prerequisites, and housing details (if In-Resident). After attendance and payment details are confirmed, a formal confirmation letter will be sent. For current course information, pricing, registration, or lodging information, please visit our web site.

### Policies and Terms

- Accepted via email or phone: 888-799-9921 or [edservices@ge.com](mailto: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

Please note that should cancellation of this class become necessary, less

than 20 working days (1 month) prior to the course start date, the following cancellation fees will be in effect: Please contact the Training Registrar directly if cancellation is necessary.

- Courses with a duration of one week or less: \$1,000
- Courses with a duration of two weeks or less: \$2,000
- Courses with a duration of three weeks or less: \$3,000

### 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.

## In-Resident Training at the GE Healthcare Institute

For your convenience during your in-resident training, there are onsite meal services and condominium accommodations conveniently located across the street from the Healthcare Institute.

### Program Managers

#### CT/PET & Cross Modality:

Joel Jensen                      [Joel.Jensen@ge.com](mailto:Joel.Jensen@ge.com)

#### MR:

Brian Adams                      [Brian.Adams@ge.com](mailto:Brian.Adams@ge.com)

#### Nuclear Medicine & Radiopharmacy:

Stacy Marten                      [Stacy.Marten@ge.com](mailto:Stacy.Marten@ge.com)

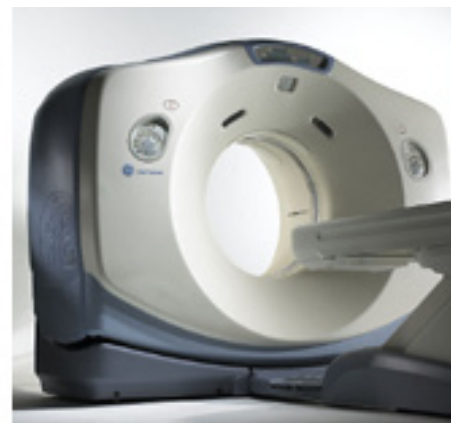
#### X-ray:

Dan Pittenger                      [Daniel.Pittenger@ge.com](mailto:Daniel.Pittenger@ge.com)

Note: Most courses have the following special considerations: A functioning laptop computer with a CD-rom reader, network card and a modem card is required for use during this course. The browser on the computer must be IE4 or Netscape 4.5 or higher. Minimum system requirements include 133 MHz Windows 95, NY 4.0 or higher 32 MB of RAM 16-bit color display adapter.

## LightSpeed Pro Series (HP60, Pro16, RT, BrightSpeed, Optima CT580W, Optima CT590RT)

The LightSpeed Pro course is a two-week inresidence class with labs. This course is intended for Service Engineers who don't have prior LightSpeed training. It will equip the Service Engineer with system and subsystem theory and hands-on lab activities to address technical service issues for the newer 4/8/16-slice family of scanners (includes LightSpeed 4/8/16 HP60, Lightspeed 16 Pro, Lightspeed RT16/ Discovery 590RT/Optima 580W/Optima CT590RT, BrightSpeed 4/8/16).



### Course Competencies:

- Identify required tools and documentation for system service
- Work safely in the LightSpeed Pro environment
- Identify FRU part numbers, and replace common FRUs
- Identify the installation steps and resources required for system installation
- Perform system quality assurance checks and performance verification
- Troubleshoot image quality issues
- Perform tube change, alignments, calibrations, and image quality checks
- Isolate system faults to the FRU level using system diagnostics
- Perform planned maintenance procedures
- Load software (LFC) during install or troubleshooting

#### Product Number:

R0026CT \$16,945

**Delivery Method:** Class/Lab

**Length of Course:** 80 hours

#### Program Information:

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

### Pre-Requisites Required:

CT Basic Physics/ Instrumentation (Web)	R0010CT	\$3,300
Troubleshooting Basics (Web)	R0901CM	\$545
Networking and DICOM Basic (Web) for DI Service	R0907CM	\$2,590
LightSpeed Pro (Web)	R0031CT	\$5,990

## LightSpeed Series (4/8/16 Slice)

The LightSpeed Series course is a 10-day inresidence class with labs. It will equip the Service Engineer with system and subsystem theory and hands-on lab activities to address technical service issues for the original 4/8/16-slice family of scanners (includes LightSpeed 4/8/16 and HiSpeed QXII).

### Course Competencies:

- Identify required tools and documentation for system service
- Work safely in the LightSpeed 4/8/16 environment
- Identify FRU part numbers, and replace common FRUs
- Identify the installation steps and resources required for system installation
- Perform system quality assurance checks and performance verification
- Troubleshoot image quality issues perform tube change, alignments, calibrations, and image quality checks
- Isolate system faults to the FRU level using system diagnostics
- Perform planned maintenance procedures
- Load software (LFC) during install or troubleshooting

### Pre-Requisites Required:

CT Basic Physics/ Instrumentation (Web)	R0010CT	\$3,300
Troubleshooting Basics (Web)	R0901CM	\$545
Networking and DICOM Basic (Web) for DI Service	R0907CM	\$2,590
LightSpeed Basic (Web)	R0032CT	\$5,990



#### Product Number:

R0018CT                      \$11,325

**Delivery Method:** Class/Lab

**Length of Course:** 76 hours

#### Program Information:

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## Discovery 750 HD Upgrade

This Upgrade course is intended for service engineers that will be servicing and supporting the 64 slice Discovery 750 HD system.

### Course Competencies:

The course includes classroom presentations on theory and serviceability approaches and extensive hands on exposure to the new components of the 750HD configuration including:

- Gemstone Spectral Imaging
- Global Operator Console 6
- X-ray tube with focal spot deflection
- X-ray generator modifications

New service feature enhancements will be introduced and utilized throughout the course.

Specific course content will include product software and hardware features that are available at the time the course is conducted.

### Pre-Requisites Required:

Global Operator Console 6 (Web)	R0039CT	\$1,625
LightSpeed VCT 32/64 Slice Upgrade (Class/Lab)	R0030CT	\$14,315



### Product Number:

R0036CT \$15,345

**Delivery Method:** Class/Lab

**Length of Course:** 36 hours

### Program Information:

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

# LightSpeed Pro (HP60, Pro16, RT, BrightSpeed Upgrade)

The LightSpeed Pro course is a one-week inresidence class with labs. This course is intended for Service Engineers who have LightSpeed training. It will equip the Service Engineer with system and subsystem theory and hands-on lab activities to address technical service issues for the newer 4/8/16-slice family of scanners (includes LightSpeed 4/8/16 HP60, Lightspeed 16 Pro, Lightspeed RT16/ Discovery 590RT/Optima 580W/Optima CT590RT, BrightSpeed 4/8/16).

## Course Competencies:

- Identify required tools and documentation for system service
- Work safely in the LightSpeed Pro environment
- Identify FRU part numbers, and replace common FRUs
- Identify the installation steps and resources required for system installation
- Perform system quality assurance checks and performance verification
- Troubleshoot image quality issues
- Perform tube change, alignments, calibrations, and image quality checks
- Isolate system faults to the FRU level using system diagnostics
- Perform planned maintenance procedures
- Load software (LFC) during install or troubleshooting

**Product Number:**

R0022CT                      \$7,715

**Delivery Method:** Class/Lab

**Length of Course:** 36 hours

**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## Pre-Requisites Required:

LightSpeed Series (4/8/16 Slice) (Class/Lab)                      R0018CT                      \$11,325

## LightSpeed VCT 32/64 Slice Upgrade

The CT LightSpeed VCT course consists of a one week in-residence class with labs. It is a differences class and is intended for Service Engineers who have previous LightSpeed Pro training. It will equip the Service Engineer with system and subsystem theory and hands-on lab activities to address technical service issues for the 32/64-slice family of scanners (includes LightSpeed VCT, LightSpeed VCT XT, LightSpeed VCT Select).



### Course Competencies:

- Identify required tools and documentation for system service
- Work safely in the LightSpeed VCT environment
- Identify FRU part numbers, and replace common FRUs
- Identify the installation steps and resources required for system installation
- Perform system quality assurance checks and performance verification
- Troubleshoot image quality issues
- Isolate system faults to the FRU level using system diagnostics
- Perform planned maintenance procedures
- Load software (LFC) during install or troubleshooting

### Product Number:

R0030CT

\$14,315

### Delivery Method: Class/Lab

### Length of Course: 36 hours

### Program Information:

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

### Pre-Requisites Required:

Global Operator Console 3, 4, & 5 (Web)	R0034CT	\$1,625
LightSpeed Pro (HP60, Pro16, RT, BrightSpeed) (Class/Lab)	R0026CT	\$16,945
<b>or</b>		
LightSpeed Pro (HP60, Pro16, RT, BrightSpeed) - Upgrade (Class/Lab)	R0022CT	\$7,715

# HiSpeed Xi and CTE Series

The CT HiSpeed Xi and CTe Series course is a 7-day inresidence class with labs. It will equip the Service Engineer with system and subsystem theory and hands-on lab activities to address technical service issues for the HiSpeed Xi and CTe family of scanners (includes HiSpeed DXi, FXi, LXi, NXi, Zxi, CTe, CTe Dual).



## Course Competencies:

- Identify required tools and documentation for system service
- Work safely in the HiSpeed Xi and CTe environment
- Identify FRU part numbers, and replace common FRUs
- Identify the installation steps and resources required for system installation
- Perform system quality assurance checks and performance verification
- Troubleshoot image quality issues
- Perform tube change, alignments, calibrations, and image quality checks
- Isolate system faults to the FRU level using system diagnostics
- Perform planned maintenance procedures
- Load software (LFC) during install or troubleshooting

**Product Number:**

R0015CT                      \$6,165

**Delivery Method:** Class/Lab

**Length of Course:** 56 hours

**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## Pre-Requisites Required:

CT Basic Physics/ Instrumentation (Web)	R0010CT	\$3,300
CT HiSpeed Xi Basic (Web)	R0013CT	\$2,590
Troubleshooting Basics (Web)	R0901CM	\$545

## CT HiSpeed CT/e Dual Differences

The CTe Dual is a new CT scanner in the HiSpeed family of scanners. This course builds on existing knowledge of previous HiSpeed training, and is a follow-up to the HiSpeed Xi and CTE and HiSpeed NXI courses. This course focuses on the component, service, and troubleshooting procedures for the HiSpeed CT/e Dual system as compared to the HiSpeed Xi, NX, and CTE systems.



### Pre-Requisites Required:

CT HiSpeed XI and CTE Series (Class/Lab)	R0015CT	\$6,165
CT HiSpeed NX/i (Web)	R0013CT	\$2,590

**Product Number:**

R0017CT \$3,300

**Delivery Method:** Web

**Length of Course:** 9 hours

**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## HiSpeed NX/i Service

This course builds on existing knowledge of previous HiSpeed training, and is a follow-up to the HiSpeed Xi and CTe course. This course focuses on the component, service, and troubleshooting procedures for the HiSpeed NXi and NXi Pro systems as compared to the HiSpeed Xi system.

### Pre-Requisites Required:

CT HiSpeed XI and CTE Series R0015CT  
(Class/Lab)

\$6,165

#### Product Number:

R0011CT \$3,300

**Delivery Method:** Web

**Length of Course:** 11 hours

#### Program Information:

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## BrightSpeed Differences

This course is for service engineers who are already trained on LightSpeed Pro and need to understand the BrightSpeed service differences.

### Course Competencies:

This course covers the different BrightSpeed models. The major subsystem changes from LightSpeed Pro (5x) are identified. Additionally, the Jedi HV subsystem is covered in detailed.

**Product Number:**

R0040CT

\$2,100

**Delivery Method:** Web**Length of Course:** 2 hours**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## CT/i Basic Service

This course is intended to prepare Service Engineers on basic CT/i safety, theory, preventive maintenance, and routine service tasks. Additionally, the course includes field-based lab activities.

### Course Competencies:

The course covers the following topics:

- Key features of the CT/i family of scanners
- Layout of CT/i service documentation
- Safety considerations for CT/i service
- Major components (FRUs), their functions, and replacement procedures
- Operation of the CT/i Service desktop
- Operation of the system at the UNIX and PROM Monitor levels
- System Error log analysis
- Planned maintenance tasks
- Installation, configuration, and functional check of software
- Mechanical calibrations and adjustments
- Tube/collimator/detector alignments (POR, ISO, BOW, CBF, and radial alignment)

**Product Number:**

R0033CT                      \$5,990

**Delivery Method:** Web

**Length of Course:** 9 hours

**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## CT True In One Console Service

This course covers the following topics on the True in One Console: Console Models, Hardware details and mechanical layout, Installation and FRU replacement, Troubleshooting using command lines and diagnostics.

### Course Competencies:

The course covers the following topics:

- Key features of the CT/i family of scanners
- Layout of CT/i service documentation
- Safety considerations for CT/i service
- Major components (FRUs), their functions, and replacement procedures
- Operation of the CT/i Service desktop
- Operation of the system at the UNIX and PROM Monitor levels
- System Error log analysis
- Planned maintenance tasks
- Installation, configuration, and functional check of software
- Mechanical calibrations and adjustments
- Tube/collimator/detector alignments (POR, ISO, BOW, CBF, and radial alignment)

**Product Number:**

R0041CT \$1,625

**Delivery Method:** Web

**Length of Course:** 1 hour

**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## Global Operator Console 3, 4, & 5

The Xtreme console is also referred to as the Global Operators Console (GOC). This is the current operator console for all CT LightSpeed and PET Discovery ST systems. This course is for service engineers who service any of the GOC3, GOC4 or GOC5 operator consoles.

### Course Competencies:

- Physical layout of each console type
- Functionality of each sub computer
- Data flow between computers
- Basic LINUX commands to service the console
- Console boot-up routine
- Console diagnostics and error log analysis
- Hardware/Software Options

**Product Number:****R0034CT****\$1,625****Delivery Method:** Web**Length of Course:** 3 hours**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## Global Operator Console 6

The Xtreme console is also referred to as the Global Operators Console (GOC). This is the current operator console for all CT LightSpeed and PET Discovery ST systems. This course is for service engineers who service the GOC6 operator console, which is the forward production console for VCT, HD750, Discovery VCT, and Discovery 690 systems.

### Course Competencies:

- Changes to the GOC6 compared with GOC5
- New hardware in the GOC6
- Detailed view of the new DIG and Disc array
- New software commands used for the GOC6
- Replacement procedures to manage the increased weight of FRUs
- Software load from cold

**Product Number:**

R0039CT                      \$1,625

**Delivery Method:** Web

**Length of Course:** 1 hour

**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## HiSpeed XI Series Service (Web)

This course is intended to prepare Service Engineers on basic HiSpeed Xi and CTE safety, theory and subsystem basics before attending the CT HiSpeed Xi and CTE Class/Lab.

**Product Number:**

R0013CT

\$2,590

**Delivery Method:** Class/Lab

**Length of Course:** 7 hours

**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## LightSpeed Basic (Web)

This course is intended to prepare Service Engineers on basic LightSpeed safety, theory, preventive maintenance, and routine service tasks before attending the LightSpeed Series (4/8/16) Class/Lab.

**Product Number:**

**R0032CT** \$5,990

**Delivery Method:** Class/Lab

**Length of Course:** 25 hour

**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## Lightspeed Pro (Web)

This course is intended to prepare Service Engineers on basic LightSpeed theory and subsystem basics before attending the LightSpeed Pro (HP60, Pro16, RT, Brightspeed) Class/Lab.

**Product Number:**

R0031CT

\$5,990

**Delivery Method:** Class/Lab**Length of Course:** 9 hours**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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# Networking and DICOM Basic for DI Service

This course is for individuals involved in servicing medical equipment. By taking this course, you will have a general Networking/DICOM foundation. The product-specific aspects of networking will be covered in the in-resident training classes.

The Networking and DICOM Fundamentals Web based training covers the following topics:

- Basic computers/operating systems
- Theory of networking
- Models/protocols
- DICOM
- Troubleshooting

## Course Competencies:

- Theory of networking
- Open Systems Interconnection (OSI) Model
- UTP & TCP/IP protocols
- DICOM standard and conformance statements
- Troubleshooting network problems

**Product Number:**

R0907CM                      \$2,590

**Delivery Method:** Web

**Length of Course:** 5 hours

**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## Troubleshooting Basics (Web)

This course is for individuals involved in servicing medical equipment. By taking this course, you will learn a proven process for troubleshooting medical equipment. You will also learn how to use various tools in a troubleshooting situation and how to interpret error messages. This course will not address how to troubleshoot specific products; you will learn this information in product training.

### Course Competencies:

- Use a six-step troubleshooting process
- Follow the troubleshooting process for a service issue for your modality
- Use tools as required for troubleshooting
- Follow safety precautions when using troubleshooting tools

**Product Number:**  
R0901CM

\$545

**Delivery Method:** Web

**Length of Course:** 3 hours

**Program Information:**

For the most current course information and pricing, please visit us at [www.gehealthcare.com/education](http://www.gehealthcare.com/education) (under Technical Service Education, click on Diagnostic Imaging: GE).

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## Essentials of Healthcare IT<sup>SM</sup>

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:

R0248PG \$3,850

##### Tuition & lodging:

R0249PG \$4,775

##### Tuition, lodging & air:

R0250PG \$5,670\*

\* US only

**Delivery Method:** Classroom

**Length of Course:** 5 days

#### Course Location:

Please visit [www.gehealthcare.com/training](http://www.gehealthcare.com/training) for the most current information on dates and locations.

# Securing the Healthcare IT Environment<sup>SM</sup>

This instructor-led class is specifically designed for technical professionals responsible for the secure transport of electronic protected health information across healthcare IT infrastructures. This class is taught by experts in the healthcare IT field and topics include: a global security overview, relevant HIPAA Title II Privacy and Security Rule information, the top 10 HCIT network attacks and ways to prevent them, strategies to mitigate risk, and securing a home network. Hands-on labs include password cracking, configuring biometric identifiers, encryption, port scanning, using network analyzers, software firewall configuration, performing an MD5 Hash, and home router configuration. Students will perform a risk analysis of medical devices using MDS2 documentation and ACCE/ECRI tools. Basic computer skills and TCP/IP network troubleshooting techniques 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:

R0265PG \$5,000

#### Tuition & lodging:

R0266PG \$5,925

#### Tuition, lodging & air:

R0267PG \$6,820\*

\* US only

**Delivery Method:** Classroom

**Length of Course:** 5 days

#### Course Location:

Please visit [www.gehealthcare.com/training](http://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.

## Wireless in the Healthcare IT Environment<sup>SM</sup>

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:

R0268PG \$5,000

##### Tuition & lodging:

R0269PG \$5,925

##### Tuition, lodging & air:

R0270PG \$6,820\*

\* US only

**Delivery Method:** Classroom

**Length of Course:** 5 days

#### Course Location:

Please visit [www.gehealthcare.com/training](http://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:

R0344PG \$2,350

#### Tuition & lodging:

R0345PG \$2,905

#### Tuition, lodging & air:

R0346PG \$3,800\*

\* US only

**Delivery Method:** Classroom

**Length of Course:** 3 days

#### Course Location:

Please visit [www.gehealthcare.com/training](http://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
- Radiologist
- Any professional who supports the field of medical technology

#### Purchase Packages:

##### Tuition:

R0307PG \$3,500

##### Tuition & lodging:

R0308PG \$4,055

##### Tuition, lodging & air:

R0309PG \$4,950\*

\* US only

**Delivery Method:** Classroom

**Length of Course:** 3 days

#### Course Location:

Please visit [www.gehealthcare.com/training](http://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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GE Healthcare  
N16 W22419 Watertown Road  
Waukesha, WI 53186  
U.S.A.  
[www.gehealthcare.com](http://www.gehealthcare.com)

