

VAMC INDIANAPOLIS, IN  
PO# 583-B30074

Line #	Description	Qty
1	<b>iU22 xMATRIX V 2012</b> <b>Intelligent Design</b> <b>Ergonomics:</b> Unique human-centered design for comfort and convenience Fully articulating flicker-free 20-inch wide format high resolution flat panel TFT/S-IPS display with nearly infinite positioning adjustments Fully articulating control panel, including height, swivel, and slide Easy access transducer connectors and integrated cable storage Digitally enhanced 8 speaker high-fidelity stereo audio Integrated footrest Integrated storage shelves 4 wheel swivel and swivel/brake lock control  <b>Architecture</b> Includes Live Volume and xPlane capability xSTREAM system architecture with capability of processing multiple data streams simultaneously built for 2D, 3D, 4D, MPR, Live Volume Imaging and Live xPlane imaging Next generation digital broadband acoustic beamforming, built for latest pulse shaping and coding techniques Up to 662,976 total digital channels High-bit, low noise, digital circuitry achieves system dynamic range up to 180dB for improved 2D performance and increased Doppler sensitivity New Adaptive Broadband flow imaging automatically adjusts bandwidth for optimal flow sensitivity and resolution Next Generation SonoCT Real-Time Compounding, with Widescreen capability and up to 9 beam-steered lines of sight XRES Adaptive Image Processing for noise and artifact reduction to improve tissue conspicuity Fully independent, multiple mode Triplex operation  <b>Transducers</b> Supports new Explora family of transducers that feature: Ergonomic designs with lightweight flexible cables New low-loss technology for better penetration with fewer artifacts Breakthrough frequency bandwidths and array configurations  <b>Intelligent Control</b> <b>Interface</b> High-resolution interactive graphical color touch panel with adjustment for various ambient light conditions Easy access primary controls with tri-state backlighting and multi-function controls Control panel operation of on-board peripheral devices Pull out alphanumeric keyboard for manual data entry User interface configurable for languages  <b>Automation</b> iSCAN intelligent one-button optimization in 2D and Doppler modes iFOCUS intelligent focusing capability for one-button optimization of focal range size and position	1

iOPTIMIZE intelligent optimization technologies for one-button approach to instantly adapt performance for different patient sizes, flow states and clinical requirements

High-Q Automatic Doppler Analysis

Intelligent Tissue Specific Imaging

Application-specific and user definable Quicktext Automatic Annotation

QuickSAVE User Defined Programs (up to 45 per transducer)

iSTIC on X6-1 allowing automated volume acquisition of cardiac cycle

### **Data**

On-board workstation-class data management with thumbnail previews and storage of images, loops, and reports

Retrospective and prospective clip capture to internal drive or removable media

Integrated DVD/CD burning capability for storage of DICOM images or export in JPEG and .avi for PC compatibility

DICOM 3.0 Print and Store capability to internal drive or DVD/CD

### **Other Core Features**

SmartExam system-guided protocols with new features that include exam record and automatic mode switching to greatly improve workflow efficiencies

Color Power Angio

Tissue Harmonics and Pulse Inversion Harmonic Imaging

Basic 3D Imaging capability with MPR visualization feature

2D, M-Mode, Pulsed, High PRF, Color Flow Doppler

Duplex CW Doppler

ECG capability

Cineloop Image, M-mode and Doppler Review

High Definition Write Zoom and Read Zoom with pan features

Chroma Imaging

Measurement tools including: distance, depth, area, and circumference

Volume Flow Measurements

Ability to send X,Y & Z volume MPR's to most PACs

### **Live 3D**

Provides Live 3D software and Live xPlane software for use with xMATRIX transducers.

(xMATRIX transducers are not included and must be purchased separately).

### **Panoramic Imaging**

Real-time extended field-of-view composite imaging, acquired in fundamental or SonoCT mode.

iU22:

Operates on C5-2, C9-4, C8-5, L12-5, L17-5, L9-3 and V6-2 transducers.

### **Netlink Dicom 3.0**

DICOM 3.0 compliant with support for the following functions: performed procedure step, storage commit, modality worklist, vascular structured reporting, OB structured reporting, GYN structured reporting, and cardiac structured reporting.

### **Vision 2012**

Vision 2012 software includes the following:

- The addition of strain elastography to the L17-5 for Breast applications
- The addition of strain elastography to the C10-3v for GYN applications

- The addition of the X6-1 to fusion/navigation and significant workflow improvements (45% reduction in steps required)
- Image quality advancements on the L12-5, L17-5, L15-7io, X6-1, and V6-2 transducers
- Live Compare
- Addition of DICOM Query Retrieve to the DICOM option – ability to call up and display an ultrasound image from a PACs system

## 2 **Radiology Pkg** 1

Includes the following:

- Abdominal Clinical Option
- Gynecology Clinical Option
- Vascular Clinical Option
- Pediatric Clinical Option
- Small Parts Clinical Option
- Musculoskeletal Clinical Option
- Obstetrical Clinical Option
- Contrast Clinical Option
- Urology Clinical Option
- TCD Clinical Option
- Interventional Clinical Option
- Tissue Doppler Imaging (TDI)

## 3 **3DQ GI** 1

Review and display 3D data sets from the Philips iU22, iE33 and HD11 systems;

Includes MPR (Multiplanar Reconstruction) capability;

Can display as 1-up (full volume), 4-up (volume/MPR), or Direct iSlice display); allows for display of thick slice data and Slice Plane view of the three MPR views.

Also provides MPR rotation, basic crosshair control, rotation and movement; crosshair and MPR border graphics controls, pan and zoom controls, user-selected motion compensation algorithm and export of BMP, JPEG, TIFF and AVI files;

Rotation speed control, Elevation resize for freehand volumes, Linear Measurements, Ellipse Measurements, Stacked Contour Measurements and display in wire mesh and surface render modes, Region of Interest (ROI) Analysis and color indices calculation;

Works with Matrix and Mechanical Volume Transducers.

## 4 **Vascular Automated Doppler** 1

Auto Doppler provides: auto placement of color flow box and steering angles in relation to vascular structures; auto sample volume placement in the area of greatest flow velocity and Auto angle correction. Auto Doppler works on all linear transducers.

## 5 **Elastography Opt Incl. functionality** 1

Features new Strain based Elastography for Breast Imaging. Available on Advanced Breast TSI on L12-5 and L17-5 transducers. It is also available for the C10-3V transducer for uterine applications. Accompanied by QLAB quantification package.

- Available in Advanced Breast TSI on L12-5 transducer
- One touch entry into elastography mode
- Elastogram applied as a region of interest box with user control of size and location through entire field of view
- Realtime indicator for elastogram quality
- Display options

- Single screen 2D with elastogram
- Side-by-side display of 2D image and 2D with elastogram
- Shadow duplication and measurement capability in side-by-side display
  - Distance and area tools
  - Duplication from either side of the display
- Six selectable elastogram display maps
- Ability to hide / show the elastogram display
- Blend capability to increase 2D visibility through elastogram display
- Acquisition rate control for elastogram optimization
- Four smoothing selections
- Five persistence selections
- Two dynamic resolution system (DRS) selections to optimize between elastogram resolution and penetration
- Four dynamic range selections for elastogram display
- Three elastogram optimization settings to optimize to different tissue compositions
- Anechoic Imaging feature

**6 X6-1 / C5-1 Transducer Bundle 1**

**X6-1 Purewave xMatrix Transducer:**

Purewave xMatrix transducer with 6-1 MHz extended operating frequencies for abdominal and OB applications. Unique high density array of over 9200 fully sampled elements allows 2D, xPlane and Live volume images.

**C5-1 Purewave Broadband Curved Array Transducer:**

PureWave curved array transducer with 5 to 1 MHz extended operating frequency range for high performance OB/GYN, Abdominal and Interventional applications. This transducer provides exceptional clinical performance for a wide range of patient types including obese and technically challenging patients.

**7 L12-5 50mm Broadband Linear Array transducer 1**

Fine pitch, 256 element, high resolution linear array transducer with 12 to 5 MHz extended operating frequency range for high resolution superficial applications, including small parts, breast, vascular and musculoskeletal imaging.

**8 C10-3v Purewave Broadband Transducers 1**

Purewave Curved array transducer with 3 to 10 MHz operating frequency range, end fire sector, 11.5 radius at curvature, 130 degree field of view for endovaginal applications.

**9 English Manual 1**  
Operation Manual

**10 English Manual 1**  
Operation Manual

**11 QLAB 9.0 NA GI/ Shs Bun 1**

***This QLAB package is only provided if purchased in conjunction with an ultrasound system that includes a QLAB Plug-In. This encompasses QLAB Core Module, Intima Media Thickness (IMT) Quantification Plug-in, Region of Interest (ROI) Quantification Plug-in, Cardiac Parametric (PQ) Quantification Plug-in, Strain (SQ) Quantification Plug-in, Cardiac 2D Quantification (2DQ) Plug-in, Cardiac 3D Quantification (3DQ), Cardiac 3DQ Advanced Plug-in, Mitral Valve Quantification (MVQ) Plug-in, GI 3D Quantification (GI 3DQ) Plug-in Elastography Analysis (EA) plug-in and CMQ (Cardiac Motion /Mechanics Quantification Plug-in).***

Includes QLAB Core Module, Intima Media Thickness (IMT) Quantification Plug-in, Region of Interest (ROI) Quantification Plug-in, Cardiac Parametric (PQ) Quantification Plug-in, Strain (SQ) Quantification Plug-in, Cardiac 2D Quantification (2DQ) Plug-in, Cardiac 3D Quantification (3DQ), Cardiac 3DQ Advanced Plug-in, Mitral Valve Quantification (MVQ) Plug-in, GI 3D Quantification (GI 3DQ) Plug-in, MicroVascular Imaging (MVI) plug-in, Elastography Quantification (EQ) plug-in and CMQ (Cardiac Motion /Mechanics Quantification Plug-in).

#### **QLAB Core Module**

QLAB is designed for ultrasound clinicians who require sophisticated analysis of image data acquired on Philips ultrasound systems.

A large number of Plug-ins is available, offering a variety of powerful 2D/3D advanced quantitative capabilities.

All Plug-ins require the QLAB Core Module.

QLAB core module provides 2D viewer by default.

The 3D Viewer comes with the 3D plug-ins when ordered.

QLAB Core Module functions include review, deletion and quantification of Philips iE33, iU22, CX50, HD15, HD11, HD7, SONOS, HDI and EnVisor C.0 image files;

PC Graphic image/movie files creation in BMP, TIFF, JPEG and AVI;

Ability to remove patient information from QLAB all screens and prior exporting new PC files;

Export of quantification data into Excel-compatible spreadsheet formats;

Built-in on-line help in multiple languages.

Ultrasound data can be sent to QLAB via DICOM network connection, MOD/CD/DVD media or USB Flash Drive/Self-powered MiniDisk devices.

#### **Intima Media Thickness (IMT) Quantification Plug-In**

Provides automated measurements of intima media thickness in carotids and other superficial vessels;

Eliminates the laborious process of manually positioning cursors, minimizing the time needed to complete an IMT study.

Compatible with Philips iE33, iU22, HD15, HD11, HD7, EnVisor C.0, SONOS and HDI systems.

#### **Region of Interest (ROI) Quantification Plug-in**

On compatible files calculates Color Mean and Standard Deviation, Echo mean and Standard Deviation, VI, FI, VFI. Enables user to apply motion compensation algorithm. Provides basic trending capabilities (off cart only).

Compatible with Philips iE33, iU22, CX50, HD15, HD11, HD7, EnVisor C.0, SONOS and HDI systems.

#### **Cardiac Parametric Quantification (PQ) Plug-In**

Allows advanced review and analysis of contrast intensities within the heart;

Provides color-coded representation of contrast intensity and replenishment rate based on either Log or linear scaling.

Compatible with iE33, SONOS and HDI systems.

#### **Strain Quantification (SQ) Plug-in**

Used in the evaluation of regional myocardial function; assessment of synchronicity and guidance during bi-ventricular pacing procedure;

Measures the myocardial velocity TDI data set and derives the displacement, strain and strain rate along user-defined M-Lines.

Compatible with iE33, iU22, CX50, HD15, HD11, SONOS and HDI systems.

#### **2D Quantification (2DQ) Plug-in**

Display of 2D ultrasound images;

Semi-automated border detection for cardiac chambers and vessel cavities;

Computes Areas, Volumes and advanced parameters for LV systolic and diastolic function including, LV Ejection Fraction (EF) and Fractional Area Change (FAC);

The Peak Ejection Rate (PER), Peak Rapid Filling Rate (PRFR) and Atrial Filling Fraction (AFF) are also reported;

Color Kinesis (CK) tool for provides color-coded visualization of global and regional wall motion;

TMAD allows visualization and quantification of Atrio-Ventricular Annulus planes Motion in order to assess cardiac global function in fast and reproducible way to facilitate trending report.

Compatible with Philips iE33, iU22, CX50, HD15 and HD11 systems.

#### **Cardiac 3D Quantification (3DQ) Plug-in**

Provides easy access to Live 3D, 3D Zoom, Full Volume and 3D Color data sets from the iE33, iU22 and SONOS 7500 Live 3D systems;

Offers viewing, cropping, slicing and quantification including distance measurements, area, Bi-plane LV Volume, Ejection Fraction (EF) and LV Mass calculations;

3DQ also provides Multiplanar Reconstruction (MPR) views for unlimited anatomical planes from 3D volume and new 3D iSlice generation.

Compatible with Philips iE33, iU22 and SONOS7500 systems.

#### **Advanced 3D Quantification (3DQA) Plug-in**

Extends the diagnostic power of Live 3D Echo by providing the first semi-automated, on-cart and off-cart analysis of true LV volumes—using all the voxels to generate a full 3D endocardial border; Cardiac 3D Quantification Advanced (3DQ Advanced) revolutionizes echo quantification and extends the diagnostic power of Live 3D echo by providing the first semi-automated, on-cart and off-cart analysis of true LV volumes—using all the voxels to generate a full 3D endocardial border. This is a true 3D border with higher accuracy and less dependency on LV shape assumptions than conventional methods, which rely on sparse view analysis.

3DQ Advanced waveform display provides accurate data for assessing global function based on LV volume, ejection fraction and stroke volume. Additionally, 3DQ Advanced allows simultaneous display of 17 regional waveforms, enabling temporal comparisons between segments.

MultiPlanar Reconstruction (MPR) views provides unlimited anatomical planes from 3D volume;

New iSlice generation run in the 3D viewer and is compatible with all Philips Live 3D dataset including color data, provides highly flexible short and long

axis slicing tool and display up to 4x4 equally spaced MPR views to facilitate LV function visualization assessment;

Measurements of LV endocardial Volumes, Stroke Volume (SV) and true 3D ejection fraction (EF) using a semi-automated border detection in 3D space;

Computes global and regional LV volumes based on ACC 17 segments model;

Displays global LV volume waveform and provides selective display of 17 regional volume waveforms;

Offers timing assessment for each 17 minimal regional volumes and determine a synchronicity

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index for all volume segments or a user-selectable group of volume segments;  
Provides comprehensive report with summary of synchronicity indexes and displays regional Timing and Radial Excursion Parametric Images in Bull's eye representation.  
iCrop capabilities with the 3D volumes.

#### **Mitral Valve Quantification (MVQ) Plug-in**

The Mitral Valve Quantification plug-in (MVQ) adds precise 2D and 3D quantification of the mitral valve anatomy and associated structures based on data acquired with Philips Live 3D Echo and the X7-2t transesophageal transducer;

Based on the precise Live 3D TEE information, the MVQ plug-in provides a clinical decision support tool to improve diagnostic confidence, surgical planning, communication between clinicians and for the patient, and follow-up care.

Compatible with the Philips iE33 system and Live3D TEE Transducer.

#### **GI 3DQ Plug-In**

Review and display 3D data sets from the Philips iU22, iE33 and HD11 systems;

Includes MPR (Multiplanar Reconstruction) capability;

Can display as 1-up (full volume), 4-up (volume/MPR), or Direct iSlice display);

Also provides MPR rotation, basic crosshair control, rotation and movement; crosshair and MPR border graphics controls, pan and zoom controls, and export of BMP, JPEG, TIFF and AVI files;

Rotation speed control, Elevation resize for freehand volumes, Linear Measurements, Ellipse Measurements, Stacked Contour Measurements, Region of Interest (ROI) Analysis;

Works with Matrix and Mechanical Volume Transducers.

#### **MicroVascular Imaging (MVI) Plug-in**

MVI uses specially designed post-processing software to map contrast agent progression. This software plug-in measures changes in the image from frame to frame, suppressing background tissue signals and capturing additional contrast data. The additional data obtained using MVI dramatically enhances vessel conspicuity.

#### **Elastography Quantification (EQ) Plug-in**

Perform parametric imaging and strain ratio analysis. Parametric imaging calculates relative strain with respect to a user defined reference region. Strain ratio allows calculation of relative strain of two regions of interest over time.

#### **Cardiac Motion/Mechanics Quantification Plug-in**

Based on 2D speckle tracking technology, CMQ provides a method for assessing global and regional cardiac function. It offers a suite of measurements and parametric displays to analyze trans-myocardial mechanics without Tissue Doppler imaging angle dependency limitations. Using the 17-segment ASE left ventricular model, CMQ provides additional information for many clinical applications such as ventricular wall motion and mechanical synchrony assessments.

Compatible with the Philips iE33, iU22, CX50, HD15 systems files.

PC requirements for all QLAB plug-ins:

- Processor: Intel Core 2/Xeon, AMD Athlon 64/Opteron or greater
  - Operating System:
    - Windows XP Pro Service Pack 3, 32-bit
    - Windows 2003 Server, 32-bit
    - Windows 2008 Server R2, 32-bit
    - Windows Vista, 32-bit
    - Windows 7, 32-bit or 64-bit
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- Memory: 2 GB RAM
- Graphics Card: 32 64 MB or greater with H/W accelerated OpenGL support and Pixel Shader 3.0 (Intel video cards may work but are not supported)
- Hard Drive: 80 GB HD with 7200 RPM
- Monitor: Minimum 1024 x 768 resolution (SVGA) and capable of 24-bit or 32-bit color display
- Media:
  - CD-ROM/DVD Drive for transferring files from iE33, iU22, HD11 XE, HD11, HD15, HD9, CX50 and EnVisor ultrasound systems
  - 640 MB 3.5-in magneto-optical drive for transferring files from HDI ultrasound systems
  - 1.2 to 2.3 GB 5.25-in magneto-optical drive for transferring files from SONOS ultrasound systems
  - USB port for transferring files from iE33, iU22, HD9, HD15, and CX50 ultrasound systems
- Mouse with a scroll wheel and a standard Microsoft keyboard

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### 2 Day ENT ACT w/Travel

1

**2 Day Entitlement ACT with Travel-** The 2 Day Advanced Customer Training (ACT) course with travel consists of advanced intensive training on the selected ultrasound system and includes the corresponding travel package.

Entitlement Advanced Customer Training (ACT) Tuitions expire within 180 days from system or upgrade installment date. Due to travel and scheduling requirements, a twenty-one (21) day notification of cancellation is required or training / education entitlements will be forfeited. Curriculum is subject to change without notice.

Travel & Accommodations for one (1) registered attendee. Includes one (1) participant's airfare from a North American customer location to a Philips North America Ultrasound Clinical Education training location with modest lodging, ground transportation and meal expenses for 2 days. Breakfast/dinner are provided by the hotel and lunch/breaks are catered by Philips Healthcare. All other expenses will be the responsibility of the attendee (ie. Baggage fees, meals while traveling, transportation to and from customer's home airport). Details are provided during the scheduling process.

\*\*\*TUITION IS ONLY VALID WHEN PURCHASING THE LIVE 3D(IE33) OR 3D/4D (IU22) CONFIGURATIONS.\*\*\*  
opting out of any of these options will alter your education entitlements.

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### 1 Day PAS Onsite

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**1 Day PAS Onsite** - Ultrasound system or upgrade onsite training provided by a PAS (Product Applications Specialist) for specific system applications or upgrades; not per modality. *Education is provided Monday - Friday during normal business hours.* Note: Philips Healthcare personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation. The training sessions should be attended by the appropriate healthcare professional as identified by the department director. *Repeat training for staff non-attendance will not be accepted.* Site must be patient-ready to meet training expectations. All onsite training day expires within 90 days from system or upgrade installation date. Exceptions are for 3D Stress onsite training (which expires 9 months from system or upgrade installation date) and Fusion & Needle Navigation onsite training (which expires 180 days from system or upgrade installation date).

\*\*\*THE NUMBER OF ONSITE TUTIONS YOU RECIEVE MAY VARY BASED ON PURCHASED OPTIONS. PLEASE CONSULT YOUR SALES REPRESENTIVE FOR FURTHER DETAILS\*\*\*

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### 3 Day ENT 3DU w/Travel

1



Entitlement University Tuitions expire within 365 days from system or upgrade installment date. Due to travel and scheduling requirements, a twenty-one (21) day notification of cancellation is required or training / education entitlements will be forfeited. Curriculum is subject to change without notice.

\*\*\*TUITION IS ONLY VALID WHEN PURCHASING THE LIVE 3D(IE33), 3D/4D (IU22), AND OR ELASTOGRAPHY CONFIGURATIONS.\*\*\*  
opting out of any of these options will alter your education entitlements.

16	Food Transpt Lodging for Cleveland Biomed Training	4
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17 US2787 Bio IU22 IE33 CTC 4 1

Course Number: US2787  
Class Length: 3.5 days (excludes Saturdays, Sundays, and Philips holidays)  
Delivery Method: Instructor-led  
Modality: Ultrasound, General  
Location: Philips Healthcare Academy, Best  
Accreditation: Certified  
Audience: Biomedical engineers, Hospital engineers

This course provides an introduction to supporting the iU22 and iE33 Imaging Systems. Students receive fundamental applications training required to understand some clinical uses of these systems. They learn how to image phantoms in order to assess system performance and how to minimally operate the system to better understand the needs of the Sonographer.

This course focuses upon equipment operation, maintenance, DICOM configuration and minor repair. Board level theory and system diagnostics are studied to facilitate repair. Hands-on labs train the student to verify proper equipment operation and learn diagnostic troubleshooting

techniques. Philips support philosophy is explained to facilitate working successfully with our support professionals.

For course enrolment and course dates:  
Please contact your local Philips representative.

**COURSE-WARE:**

Student Manual

All course materials are on CSIP level 1.

**PREREQUISITES:**

- . Basic analog and digital electronics knowledge
- . Ultrasound and Transducer knowledge

**COURSE AIMS:**

Upon completion of this course it is expected that the student will be capable of partnering with our service professionals to meet the servicing needs of the customer.

He/she will be able to:

- . Recognize (and scan phantoms) with standard views.
- . Minimally operate the Ultrasound Systems.
- . Isolate and repair minor system failures.
- . Run full system diagnostics (Normal User)

**KEY TOPICS:**

- . System mechanics
- . User presets backup and restore
- . Dicom setup

\* PHILIPS PROPRIETARY MATERIALS SUCH AS DIAGNOSTIC SOFTWARE AND SERVICE DOCUMENTATION ARE NOT INCLUDED IN THE TRAINING AND WILL NOT BE AVAILABLE FOR USE OUTSIDE OF THE TRAINING ENVIRONMENT. THE TRAINEE MUST RETURN ALL PROPRIETARY MATERIALS RECEIVED DURING THE TRAINING AT THE END OF THE TRAINING. CUSTOMER ACKNOWLEDGES AND AGREES THAT NEITHER CUSTOMER NOR TRAINEE WILL RECEIVE A LICENSE TO SUCH PROPRIETARY MATERIALS AND THAT THE TRAINEE MAY NOT BE ABLE TO FULLY UTILIZE THE TRAINING WITHOUT THE USE OF SUCH PROPRIETARY MATERIALS. (CERTAIN LICENSES MAY BE OBTAINED THROUGH PURCHASE OF AN ALLIANCE CO; OP AGREEMENT.) Course dates and location to be finalized by Philips. Philips shall attempt to accommodate Customer requested dates and training location. The price quoted includes course tuition. Travel and living expenses are not included, but may be purchased separately through Philips.

**IMPORTANT Notes Regarding Admission to Philips Customer Engineer Training Courses:**

1. Trainee must meet all prerequisites
2. Course expires one (1) year from equipment installation date (or purchase date if sold separately)
3. Customer must sign Philips Nondisclosure statement
4. Trainee must sign Philips Nondisclosure statement
5. Customer must sign Philips terms and conditions of training