Clinical Application

Our Clinical Application Training Programs rely primarily on a combination of **theoretical approach** along with **extensive hands-on practice** based on tailored programs intended to meet the customer's objectives.
Being the authorized training provider for **Siemens**, **Samsung, and Toshiba**, and having been the authorized training provider for **Philips** and **GE Healthcare** previously, **Medical Professionals** is very well positioned - through its Clinical Education Specialists Team and its wide network of collaborators - to help its customer use their medical imaging equipment in the optimal manner in order to ensure the highest level of patient satisfaction as well as the highest return on investment.

Those trainings can be delivered either **Onsite** at the customer facility or **Offsite** at a reference site recommended by Medical Professionals.

MRI Clinical Application Training

Duration

Can be tailored to specific department's need

Objectives

- Support technologists and radiologists by optimizing the use of equipment they have acquired
- Apply proper positioning and scanning protocols for all MRI procedures
- Evaluate image quality and properly adjust the imaging parameters
- Apply international safety guidelines for the patients, self and others

Target Audience

- Technologist
- Radiologist
- Radiology resident
- Medical imaging student

Prerequisite

None

Topics Covered

Overview:
- System accessories
- Magnet controls and safety features
- Operation of the scanner interface
- How to build scan protocols and review scan parameters

Patient handling and safety:
- Patient education and preparation
- Injection protocols and manipulation
- Patient screening
- Lab values
- Safety guidelines and consent forms
- Ways to minimize scan time
- Patient monitoring and code procedures
- Vital signs
- Infection control

MRI scan procedures:
- Neuro, MSK and body imaging including but not limited to : routine brain, cervical, dorsal, lumbar, IAC, orbits and pituitary, knee, shoulder, elbow, wrist, ankle, foot, hips, pelvis, abdomen, liver, pancreas MRCP, prostate, long bones (femur or leg), epilepsy and MS protocols and breast
- Contrast enhanced and non-enhanced vascular Imaging : angio circle of Willis and brain MRV, MRA of carotids, renal arteries, pulmonary arteries, lower limb angio or distal run-off using the available options
- Advanced cases, i.e. : spectroscopy, diffusion tensor imaging, brachial plexus, enteroclysis, brain perfusion, and cardiac imaging

Workstation, reviewing skills:
- Basics functionality
- Reformat
- Tools
- 3D reconstruction
- Fibertrack
- Volume rendering
- DWI and ADC calculation
- Brain perfusion
- Spectroscopy single and multi-voxel
- Cardiac
- Breast graph of wash in wash out

CT Scan Clinical Application Training

Duration

Can be tailored to specific department's need

Objectives

- Support technologists and radiologists by optimizing the use of equipment they have acquired
- Apply proper positioning and scanning protocols for all CT procedures
- Evaluate image quality and properly adjust the imaging parameters
- Apply international radiation protection norms for the patient, self and others

Target Audience

- Technologist
- Radiologist
- Radiology resident
- Medical imaging student

Prerequisite

None

Topics Covered

Overview:
- System accessories
- Gantry controls and safety features
- Operation of the scanner interface
- How to build scan protocols and review scan parameters

Patient handling and safety:
- Patient education and preparation
- Injection protocols and manipulation
- Patient screening
- Lab values
- Radiation safety and measuring radiation dose
- Ways to minimize patient dose
- Patient monitoring and code procedures
- Vital signs
- Infection control

CT scan procedures:
- Routine cases, i.e. : brain scan, high resolution chest, sinuses, standard chest and abdomen examinations
- Cases with contrast media injection, i.e.: brain, neck, chest, abdomen pelvis, triphases liver, pancreas
- Vascular cases, i.e. : circle of Willis, carotids, pulmonary embolism, aorta angiography, abdominal arteries, lower limbs
- CT cardiac
- CT colonography
- CT perfusion

Workstation, reviewing skills:
- Basics functionality
- Filmer, burn CD / DVD
- Reformat
- Tools
- Vessel analysis
- 3D reconstruction
- Cardiac
- Colonography
- Bronchography
- Perfusion
- Nodule detection
- CT image anatomy

X-Ray Clinical Application Training

Duration

Can be tailored to specific department's need

Objectives

- Support technologists and radiologists by optimizing the use of equipment they have acquired
- Apply proper positioning and examination protocols for all X-RAY procedures
- Evaluate image quality and properly adjust the imaging parameters
- Apply international radiation protection norms for the patient, self and others

Target Audience

- Technologist
- Radiologist
- Radiology resident
- Medical imaging student

Prerequisite

None

Topics Covered

Overview:
- System accessories
- Identify system components and functionality
- Safety and emergency procedures.
- Image acquisition, customization and processing
- How to create a protocol data base for different body parts

Patient handling and safety:
- Patient education and preparation
- Special procedures protocols and manipulation
- Patient screening
- Radiation safety and measuring radiation dose
- Ways to minimize patient dose
- Proper parameters and protocol selection
- AEC / manual technique

X-ray procedures:
- Position for exposure out of table, wall stand and table in bucky exposures
- Routine cases, i.e. : brain, chest, abdomen, pelvis, upper and lower extremities examinations
- Advanced application

Workstation, reviewing skills:
- Basics functionality
- Adjust / reset window width and level settings
- Reprocessing images
- Tissue contrast, edge enhancement settings, noise reduction and tissue equalization
- Flip and rotate image
- Zoom image
- Apply / remove annotation
- Perform measurements

Nuclear Medicine Clinical Application Training

Duration

Can be tailored to specific department's need

Objectives

- Support technologists and radiologists by optimizing the use of equipment they have acquired
- Apply proper positioning and scanning protocols for all Nuclear Medicine procedures
- Evaluate image quality and properly adjust the imaging parameters
- Apply international radiation protection norms for the patient, self and others

Target Audience

- Technologist
- Radiologist
- Radiology resident
- Nuclear medicine physician
- Medical imaging student

Prerequisite

None

Topics Covered

Overview:
- System accessories
- Gantry controls and safety features
- Operation of the scanner interface
- How to build scan protocols and review scan parameters

Patient handling and safety:
- Patient education and preparation
- Injection protocols and manipulation
- Patient screening
- Radiation safety and measuring radiation dose
- Radioactive preparation and manipulation
- Patient monitoring and code procedures

Nuclear Medicine procedures:
- Whole bone scan, 3 phase, bone scan
- Cardiac imaging, MUGA scan, etc...
- Renal imaging i.e : DTPA, MAG3, DMSA
- Lung imaging
- Abdominal studies i.e. : liver spleen, GI bleed etc...
- Brain imaging
- Oncology imaging

Workstation, reviewing skills:
- Cardiac processing
- Lung analysis
- Renal analysis
- SPECT processing
- Dynamic analysis

PET/CT Clinical Application Training

Duration

Can be tailored to specific department's need

Objectives

- Support technologists and radiologists by optimizing the use of equipment they have acquired
- Apply proper positioning and scanning protocols for all PET / CT procedures
- Evaluate image quality and properly adjust the imaging parameters
- Apply international radiation protection norms for the patient, self and others

Target Audience

- Technologist
- Radiologist
- Radiology resident
- Nuclear medicine physician
- Medical imaging student

Prerequisite

None

Topics Covered

Overview:
- System accessories
- Gantry controls and safety features
- Operation of the scanner interface
- How to build scan protocols and review scan parameters

Patient handling and safety:
- Patient education and preparation
- Injection protocols and manipulation
- Patient screening
- Lab values
- Radiation safety and measuring radiation dose
- Radioactive preparation and manipulation
- Patient monitoring and code procedures

PET / CT procedures:
- Whole bone imaging
- Cardiac imaging
- Brain imaging

Workstation, reviewing skills:
- Cardiac post processing
- WB review skills
- Brain review skills

Cardio-Vascular Clinical Application Training

Duration

Can be tailored to specific department's need

Objectives

- Understand the vascular and cardiac anatomies
- Identify normal anatomy
- Apply proper positioning and protocols for all cardio-vascular procedures
- Evaluate image quality and properly adjust the imaging parameters
- Apply international radiation protection norms for the patient, self and others
- Provide proper patient care and comfort
- Recognize emergency patient conditions and initiate life-saving first aid and basic life support procedures

Target Audience

- Technologist
- Radiologist
- Radiology resident
- Medical imaging student

Prerequisite

None

Topics Covered

Overview:
- System accessories
- Gantry controls and safety features
- Operation of the cath lab fixed c-arm interface
- How to differentiate protocols according to anatomies
- Both cardiac and vascular anatomies overview

Patient handling and safety:
- Patient education and preparation
- Injection protocols and manipulation
- Patient positioning
- Lab values
- Radiation safety and measuring radiation dose
- Ways to minimize patient dose
- Patient monitoring
- Vital signs
- Infection control

Vascular procedures :
- Daily cases using contrast media i.e. : cerebral angiography, carotids, upper limbs, aortic arch, abdominal aorta, renal arteriogram and lower limbs
- Embolization : liver
- Cerebral arteries coiling

Cardiac procedures:
- Cardiac cases
- Coronary angiography
- PCI
- Pacemakers
- Pediatric and congenital procedures

Workstation, post processing skills:
- Basics functionality
- Filmer, burn CD / DVD
- Tools
- Vessel analysis
- 3D and 3DCT reconstruction
- Cardiac post processing steps
- Advantage paste