

Digital Radiography (DR) and Computed Tomography (CT) Training Course Description

This 40-hour course is designed for the system user who has an entry level understanding of digital imaging and is looking to advance their understanding of DR and CT practices. This course may be applied toward official training requirements for initial certification or CEU requirements for re-certification with NAS-410 or SNT-TC-1A.

CT stands as one of the most complex imaging modalities in industry. This course will focus on the building blocks of DR and how those parameters transition into performing CT. This will include understanding the right questions to ask before you start the CT scan, and then how to develop a CT scan around the information you are wanting to gather. This course will have a heavy emphasis in technique development and creating a quality CT scan. This class will blend classroom instruction with hands on application with state-of-the-art CT equipment. Topics of instruction will include:

- Digital Imaging Principles
- Components of the CT system
 - Strengths and weaknesses of different detectors
 - Strengths and weaknesses of different x-ray tubes
- What questions to ask in technique development
- Balancing resolution, geometry, and unsharpness
- Matching defect detectability with resolution and contrast
- Noise and scatter control
 - Beam hardening
 - Frame averaging
 - Detector corrections
 - Collimation
 - Part and fixture scatter
- Optimized projection data
- Balancing CT quality and time
- Minimizing CT artifacts in data set
- Advanced scanning modes
 - Helical, Panel Shift, Offset, and Pixel Push
- CT Quality
 - RQI, Volumetric IQIs, and standard IQI
- Implementing stability standards for quality assurance
 - ASTM E2737, E1695, E3375...
- And much more...