

Digital Radiography and Fluoroscopic Radiation Safety for the Certified Radiologic Technologist

Fluoroscopy Review

8:00 a.m.

Visual Physiology
Image Intensifiers & Flat Panel Detectors
Image Quality

9:00 a.m.

Gains
Automatic Brightness Stabilizers

Break 9:50 – 10:00 a.m.

10:00 a.m. – 11:30 a.m.

Recording Systems
Fluoroscopy Options
The Fluoroscopy Exam
Pediatric Fluoroscopy
Biologic Effects
QC Regulations

11:30 – 12 Noon

Introduction to Digital Imaging – CR/DR

12 Noon – 1 p.m.

Digital Radiography

1:00 p.m. – 2:20 p.m.

Physics of Digital Imaging
DR & CR Image Capture, Extraction, and Processing

Break 2:20 p.m. – 2:30 p.m.

2:30 p.m. – 4:00 p.m.

Image Evaluation
Troubleshooting Acquisition Errors
Artifacts in Digital Imaging

Objectives

- Explain visual pathology and its relationship to fluoroscopy.
- Discuss flux gain, brightness gain, and minification gain.
- Describe the components of an image intensifier.

- Identify the differences between image intensifiers and flat panel detectors in fluoroscopy.
- Discuss ways of reducing radiation dose to patients in fluoroscopy and digital imaging.
- Discuss the importance of the “Image Gently” concept in pediatric fluoroscopy and digital imaging.
- Distinguish between cassette-based (CR) and cassette-less (DR) digital imaging systems.
- Explain basic concepts of radiation physics and digital imaging.
- Identify digital artifacts and know how to correct them.