Speaker and Course Information for CA Limited Radiography Session

**Speaker:** George Layton, DC, RT, (R)(ARRT)

**Course Title:** CA LR Course: Radiography: Why Do We Do What We Do?

**Date:** Friday, August 11, 2017 from 8am-5pm

**CE Hours Provided:** 8 General hours

**Course Summary:**

This course will reinforce information that in my opinion is important to know and understand. My goal is to provide a better understanding of the how and why behind some concepts utilized in radiography.

At the end of this course, the attendee will be able to apply this information to make them better radiographers which ultimately leads to better patient care and safety.

**Course Outline:**

**Introduction**
- Who I am
- Qualifications
- Brief overview of the day
- Expectations – ask what they would like to learn
- Encourage to “Please ask questions”

**Things that you shouldn’t do.**
- You don’t tug on Superman’s cape
- You don’t spit into the wind
- You don’t pull the mask off that old Lone Ranger
- And you don’t mess around with Jim
- Squat with your spurs on
- Kick a cow patty on a hot day

**Tube Warm Up – small exposures first**

**Radiation/Physics**
- Scattered Radiation: analogies of how scatter behaves
- Beam attenuation: 4 cm rule
- Inverse Square law: how it applies to beam intensity and safety
- Anode-Heal Effect: how it applies and why it is important
Measuring patients:
- Why measuring patients with calipers is important to capturing quality images along with the concept of ALARA

Patient Compliance – examples of

Patient Preparation:
Artifacts such as Bra’s, Jeans, Jewelry & etc.

Safety
- Cardinals Principles in Protection

Time
Distance
Shielding
Shielding: how to accurately use gonadal shielding. Examples of equipment and shields.
The 10 day rule and the 28 day rule

Bergonie & Tribodiu
Motion: Greatest offender of Image Sharpness
- Anything longer that 1/3 of a second cannot reliably hold camera steady
- Voluntary vs. Involuntary motion – How to minimize motion
- Patient compliance – story about 13 year old female. “will these hurt?”

Exposure logs: the importance of
X-Ray tube care
- Warm up procedures
- Importance of minimizing the amount of prep time.

Collimator Light Bulb – why you should have one on hand and know how to replace it.

Image Identification: as a permanent part of the film. Why you should not use Magic Markers and Labels stuck onto the film.
- Proper identification marking
- The importance of using lead markers

Film vs Digital:
- basic difference in how the two behave regarding over exposer or under exposer.
- Why you should erase image plates that have not been used for 48 hours or more
- Quantum Mottle
- Digital : you must expose at least 1/3 of the image plate

Mitchel Markers – placement for obliques

Digital Post Image Processing
Shuttering vs. Collimation: explanation of the difference
Window/Leveling: why you should not prior to archiving

Factors:
- kVp, mA, mAs : How mAs is derived (calculated) mAs charts

Technique Charts:
- SuperTech Slide Rule: - Introduction to and how to use
- How to create technique charts utilizing the SuperTech Slide Rule

Focal Spot: Large vs. Small
Challenges radiographing the Large Patient
- Books are written for average to small sized patients
- Tricks – measuring from the jugular notch to find the iliac crest
- Standing Vs. Recumbent – pros and cons
- Collimation to reduce scatter and patient exposure

Cervical Spine:
AP Open Mouth – how to do them consistently.
Lateral (including flexion/extension
Obliques
Thoracic Spine:
• AP – adults collimate to 17” then place the top of the collimation at the thyroid cartilage. The Central Ray then falls at T7
• Lateral
  Thoracic Spine vs Chest view – differences
    Chest – Arms UP

Lumbar Spine:
• AP
• Lateral
• Obliques
• Spot Shots – AP,

Sacrum/Coccyx – prepare for the study – evacuate the bowels

Thumb – modified Roberts view

Open Question and Answer Session

Customer Service:
• Language – Don’t say “Shoot, Expire “make you glow”
• They might not remember your name, but they will remember how you make them feel.

Speaker Bio:

GEORGE LAYTON, D.C., R.T., (R)(ARRT)

13085 N.W. Hawthorne Drive, Platte City, Missouri | (816) 858-9093 | playton@kc.rr.com

EDUCATION
Colorado Technical University, North Kansas City, MO
R.T. (R) (ARRT), Radiological Technology 2010
Graduated with Honors. Associate of Applied Science Radiologic Technology

Cleveland Chiropractic College, Kansas City, MO
Doctorate in Chiropractic 1981

Maple Woods Community College, Kansas City, MO
Associate in the Arts 1978

AWARDS & HONORS:
President for local chapter of Lambda Nu (National Honor Society for Radiologic and Imaging Sciences) 2010
Treasurer for local chapter of Lambda Nu (National Honor Society for Radiologic and Imaging Sciences) 2009
Missouri State Radiological Society 2010 Student Bowl Team Winner (3rd place out of 14 teams statewide) April 2010

TEACHING EXPERIENCE:
Radiological Technologist - assists and supervises chiropractic interns radiographing their patients in the Outpatient Clinic: August 2010 – Presently - Cleveland University – Kansas City, Overland Park, KS

Instructor, 2011 – May, 2015: Course: X-Ray Procedures (positioning) - Cleveland University – Kansas City, Overland Park, KS

RELATED EXPERIENCE:
Radiological Technologist – Student Clinical Site  October 2009 – June 2010 (9 months) St. Francis Hospital, Maryville, MO

Radiological Technologist – Student Clinical site  July 2009 – September 2009 (3 months) Orthopedic Surgeons, Inc. (OSI), North Kansas City, MO

Radiological Technologist – Student Clinical site  April 2009 – July 2009 (3 months) Liberty Hospital, Liberty, MO

LICENSURE:

The Kansas State Board of Healing Arts – Radiologic Technologist, #22-03791

MEMBERSHIPS:

The American Registry of Radiologic Technologists
The American Society of Radiologic Technologists
The Missouri Society of Radiologic Technologists
Cleveland Chiropractic College Alumni Association