**High Plains Technology Center**

**Health Careers**

**Learning Activity Packet (LAP) for Radiology Aide**

**Related unit of instruction:**

Imaging Equipment Processing and PACS

**Approximate Completion time:**

15 hours

**Rationale for the Lap:**

This LAP is designed to help the student learn the basics of darkroom safety, setting up the film processor, cleaning and maintaining the processor, patient film identification, and entering patient data.

**Criteria for successful completion:**

By the end of this LAP the student will

1. Read and turn in work sheets for Chapter 6 Adler and Carlton’s *Introduction to Radiologic Science and Patient Care*
2. Pass the test for the chapter

**Learning Objective:**

*Radiology Administration Chapter 6*

1. Provide an overview of the administration of a hospital radiology department and the structure of hospital organization.
2. Describe how the radiology department fits into the hospital world.
3. Appreciate the role of the radiology administrator.
4. Define the organization of a hospital and a hospital department of radiology or medical imaging.
5. Explain the functions of management, including planning, organizing, staffing, directing, controlling and coordinating.
6. Discuss the transition from traditional functions of management to the requirements of managing radiology in the current health care environment.
7. Describe regulating agencies that affect radiology.
8. Discuss the characteristics of desirable applicants for employment in radiology imaging.

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1. Read and turn in work sheets for Chapter 7 Adler and Carlton’s *Introduction to Radiologic Science and Patient Care*
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**Learning Objective:**

*Radiographic Imaging Chapter 7*

1. Discuss primary, scatter and remnant radiation.
2. Describe the fundamentals of image production.
3. Discuss radiographic quality in terms of density, contrast, recorded detail and distortion.
4. List the major factors that influence radiographic quality.
5. Differentiate sharpness of detail from visibility of detail.
6. Perform basic calculations using milliampere seconds, inverse square law, exposure maintenance and 15% rule formulas.
7. Describe film/screen imaging, fluoroscopic imaging and digital imaging.

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1. Read and turn in work sheets for Chapter 8 Adler and Carlton’s *Introduction to Radiologic Science and Patient Care*
2. Pass the test for the chapter

**Learning Objective:**

*Radiographic and Fluoroscopic Equipment Chapter 8*

1. Explain radiographic equipment manipulation.
2. List the generic components of a radiographic system.
3. Locate the x-ray tube in a radiographic room.
4. Describe the purpose of the collimator and its importance in radiation protection.
5. Describe the various types of radiographic tables and how they are operated.
6. Identify the major controls on the radiographic system control console.
7. Describe the various types of radiographic tube stands and how they are manipulated.
8. Describe the various planes of x-ray tube movement and how they are controlled.
9. Explain the purpose of the upright wall Bucky system and cassette holder.
10. Discuss the concept of alignment of the various radiographic system components.
11. Describe the movement of the fluoroscopic tower.
12. Describe the two major types of mobile systems.

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By the end of this LAP the student will

1. Read and turn in work sheets for Chapter 10 Adler and Carlton’s *Introduction to Radiologic Science and Patient Care*
2. Pass the test for the chapter

**Learning Objective:**

*Human Diversity Chapter 10*

1. Define human diversity.
2. List some of the human diversity characteristics.
3. Describe the human diversity traits of age, ethnicity or national origin, race, gender or sexual orientation and mental and physical ability.
4. Name the values that are prescribed to U.S. mainstream culture.
5. List the elements associated with cultural competency.
6. Discuss valuing diversity.
7. Know the empathetic practices that help foster cultural insight and produce improved outcomes.
8. Describe the six areas of human diversity that health care providers need to understand to provide quality and effective care.
9. Discuss ways in which the professional medical imaging organizations have expressed valuing human diversity.