

# X-RAY TECHNOLOGY/1 (375 Hours)

Course No.: 76-45-83

## COMPETENCY CHECKLIST

Student Name \_\_\_\_\_

Teacher Name \_\_\_\_\_ School Site \_\_\_\_\_

Start Date \_\_\_\_\_ Completion Date \_\_\_\_\_ Certificate Date \_\_\_\_\_

Teacher Signature \_\_\_\_\_ Student Signature \_\_\_\_\_

(Signature verifies completion of course competencies)

### A. ORIENTATION AND GENERAL SAFETY

#### PRINCIPLES (Theory: 3 hrs)

- \_\_\_\_\_ 1. Scope and purpose of the course
- \_\_\_\_\_ 2. Course content as part of Multiple Pathways
- \_\_\_\_\_ 3. Class/office/lab policies and procedures
- \_\_\_\_\_ 4. Jobs in field w/impact on x-ray technicians
- \_\_\_\_\_ 5. Opportunities for promoting gender equity
- \_\_\_\_\_ 6. X-ray technician vs. radiologic technologist
- \_\_\_\_\_ 7. CDPH-RHB policies & program requirements
- \_\_\_\_\_ 8. Primary mission of ASRT
- \_\_\_\_\_ 9. Identify/discuss role of RT, CRT, and XT
- \_\_\_\_\_ 10. Cal/OSHA & its laws pertaining to x-ray techs
- \_\_\_\_\_ 11. EPA legislation impact on industry practices
- \_\_\_\_\_ 12. Proper removal of hazardous materials
- \_\_\_\_\_ 13. Class/work first aid/emergency procedures
- \_\_\_\_\_ 14. Responsibilities to maintain safe workplace
- \_\_\_\_\_ 15. Pass safety test with 100% accuracy

### B. COMMUNICATION SKILLS (Theory: 3 hrs)

- \_\_\_\_\_ 1. Define communication
- \_\_\_\_\_ 2. Stages of communication process
- \_\_\_\_\_ 3. Demo techniques to remove barriers
- \_\_\_\_\_ 4. Role-play examples of communication

### C. CRITICAL THINKING SKILLS (Theory: 3 hrs)

- \_\_\_\_\_ 1. Steps in defining/clarifying issues/problems
- \_\_\_\_\_ 2. Important attributes in judging information
- \_\_\_\_\_ 3. Determining adequacy of information
- \_\_\_\_\_ 4. Demo listed affective techniques
- \_\_\_\_\_ 5. Macro-cognitive techniques to sharpen skills
- \_\_\_\_\_ 6. Micro-cognitive techniques to sharpen skills

### D. RESOURCE MANAGEMENT (Theory: 1 hr)

- \_\_\_\_\_ 1. Define listed terms related to topic
- \_\_\_\_\_ 2. Management of resources in x-ray facility

- \_\_\_\_\_ 3. Examples of effective management
- \_\_\_\_\_ 4. Benefits of effective resource management
- \_\_\_\_\_ 5. Economic/environmental benefits/liabilities

### E. MEDICAL ETHICS (Theory: 5 hrs)

- \_\_\_\_\_ 1. Define listed terms related to topic
- \_\_\_\_\_ 2. Discuss policies/procedures related to topic

### F. MEDICAL TERMINOLOGY (Theory: 10 hrs)

- \_\_\_\_\_ 1. Define root words, prefixes, and suffixes
- \_\_\_\_\_ 2. Origin/pronunciation/spelling/pluralization
- \_\_\_\_\_ 3. Discuss/demo listed terminology activities
- \_\_\_\_\_ 4. Exam on spelling/defining/analyzing terms
- \_\_\_\_\_ 5. Define abbreviations/symbols in radiography
- \_\_\_\_\_ 6. Define/demo body/part positioning terms
- \_\_\_\_\_ 7. Define/demo radiographic positioning terms
- \_\_\_\_\_ 8. Define/locate body/part relationship terms
- \_\_\_\_\_ 9. Define/demo body/part movement terms
- \_\_\_\_\_ 10. Similarities/differences between listed terms
- \_\_\_\_\_ 11. Critique orders, requests, & diagnostic reports
- \_\_\_\_\_ 12. Translate medical report to common language

### G. ANATOMY AND PHYSIOLOGY I (Theory: 30 hrs)

- \_\_\_\_\_ 1. Define listed terms related to topic
- \_\_\_\_\_ 2. Identify/discuss role & parts of listed systems
- \_\_\_\_\_ 3. Demo labeling/identifying of listed items
- \_\_\_\_\_ 4. Define listed terms relating to bones/skeleton
- \_\_\_\_\_ 5. Identify/discuss functions of skeletal system
- \_\_\_\_\_ 6. Define listed terms relating to muscles
- \_\_\_\_\_ 7. Identify/discuss muscle functions
- \_\_\_\_\_ 8. Discuss/demo labeling/evaluating bones

### H. FILM CRITIQUE I (Theory: 15 hrs)

- \_\_\_\_\_ 1. Define listed terms related to radiography
- \_\_\_\_\_ 2. Identify/discuss radiography analysis

- \_\_\_\_\_ 3. Discuss/demo techniques of film critique
- \_\_\_\_\_ 4. Identify/discuss listed criteria for evaluation
- \_\_\_\_\_ 5. Discuss/demo analyzing sample radiographs

**I. IMAGE RECEPTOR SYSTEM** (Theory: 10 hrs/  
Lab: 10 hrs)

- \_\_\_\_\_ 1. Identify/discuss principles of film processing
- \_\_\_\_\_ 2. Demo/apply principles of film processing
- \_\_\_\_\_ 3. Identify/discuss features of x-ray darkroom
- \_\_\_\_\_ 4. Demo darkroom/film processing techniques

**J. RADIOGRAPHIC POSITIONING I** (Theory: 50 hrs)

- \_\_\_\_\_ 1. Define listed terms related to positioning
- \_\_\_\_\_ 2. Identify general positioning principles
- \_\_\_\_\_ 3. Discuss/demo patient preparation for exam
- \_\_\_\_\_ 4. Demo basic & special positioning
- \_\_\_\_\_ 5. List/identify central ray location w/specifics
- \_\_\_\_\_ 6. Factors to produce acceptable radiograph
- \_\_\_\_\_ 7. Patient instructions: basic/special projection
- \_\_\_\_\_ 8. Demo list of radiographic positions/analysis

**K. CLINICAL ASSISTANT PROCEDURES I**

(Theory: 15 hrs)

- \_\_\_\_\_ 1. Importance of basic clinical procedures
- \_\_\_\_\_ 2. Discuss/demo listed clinical techniques

**L. PRINCIPLES OF EXPOSURE & IMAGE QUALITY I**

(Theory: 15 hrs/Lab: 5 hrs)

- \_\_\_\_\_ 1. Define listed terms related to exposures
- \_\_\_\_\_ 2. Identify/discuss radiographic calculations
- \_\_\_\_\_ 3. Demo calculating/evaluating exposures
- \_\_\_\_\_ 4. Define listed items related to exposure
- \_\_\_\_\_ 5. Effects of kVp and of the primary beam
- \_\_\_\_\_ 6. Demo application of exposure principles
- \_\_\_\_\_ 7. Define radiographic terminology
- \_\_\_\_\_ 8. Discuss film quality/differences
- \_\_\_\_\_ 9. Demo methods for improving image quality

**M. CLINICAL EXPERIENCE** (Clinical: 200 hrs)

- \_\_\_\_\_ 1. Demo basic clinical/radiographic principles
- \_\_\_\_\_ 2. Demo care for patient with listed disorders
- \_\_\_\_\_ 3. Demo radiographic standards for categories
- \_\_\_\_\_ 4. Demo proper imaging procedure/State exam