



South Central College

DA 1816 Radiology I

Course Outcome Summary

Course Information

Description	Radiology I is designed to provide knowledge and skills in intra-oral radiographic techniques, image principles and techniques, radiographic equipment and image receptors, radiation exposure guidelines, patient and operator protection and safety, anatomical landmarks and pathologies, radiographic film, film processing mounting and viewing, record keeping and quality assurance. (Prerequisites: DA 1811, DA 1812, DA 1850)
Total Credits	3
Total Hours	64

Types of Instruction

Instruction Type	Credits/Hours
Lecture	2 / 32
Laboratory	1 / 32

Pre/Corequisites

DA 1811, DA 1812, DA 1850

Institutional Core Competencies

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Competencies

1. Identify radiographic terminology

Learning Objectives

Describe the correct uses of dental radiography terms
Recall radiographic terminology

2. Explain radiographic examinations, types and criteria

Learning Objectives

Identify various radiographic dental examination types and purposes
Describe radiographic image receptors, requirements and criteria

Recognize general intra-oral radiographic diagnostic criteria and prescription factors
Identify each film image projection criteria

3. Describe radiographic x-ray equipment

Learning Objectives

Identify intra-oral radiographic regulations and purpose
List key dental radiographic machine components and functions

4. Explain digital radiography

Learning Objectives

Explain basic digital radiographic fundamentals
Identify digital radiographic equipment and functions
Describe digital radiographic procedural steps

5. Describe radiographic image receptor holding devices

Learning Objectives

Label image receptor components and purposes
List radiographic receptor holding devices
Name radiographic image receptor holder techniques

6. Incorporate radiographic radiation safety and protection

Learning Objectives

Identify patient protection methods
Recognize operator protection guidelines and techniques
List personnel and equipment monitoring devices
Describe radiation safety, protection methods and techniques

7. Explain radiation exposure guidelines

Learning Objectives

Identify federal and state radiation regulations
Describe American Dental Association (ADA) exposure guidelines and criteria
Explain radiation exposure guidelines for Maximum Permissible Dose (MPD), Maximum Annual Dose (MAD), and As Low As Reasonably Achievable concepts (ALARA)

8. Describe intra-oral radiographic techniques

Learning Objectives

List intra-oral radiographic techniques
Recognize basic paralleling radiographic technique principles and rules
Explain bitewing technique principles and rules
Identify radiographic technique errors and corrections

9. Perform intra-oral radiographic techniques

Learning Objectives

Employ procedure preparation, safety and exposure sequence guidelines
Demonstrate the paralleling radiographic technique
Apply digital imaging techniques
Use the bitewing radiographic technique

10. Summarize radiographic image receptors

Learning Objectives

Identify radiographic film components and functions
Recall latent image formation
Label intra-oral film items, packaging and functions
List intra-oral image receptor types and sizes
Explain radiographic film speed or sensitivity and classifications

11. Describe radiographic anatomy, associated structures and terminology

Learning Objectives

Define anatomical terminology
Differentiate between dental structures and general anatomy
Label maxillary radiographic anatomy and landmarks
Identify mandibular radiographic anatomy and landmarks

12. Explain radiographic image mounting and viewing

Learning Objectives

Identify radiographic film mount purpose, film mounts, viewing equipment and their use
Explain film mount process, labeling, methods and viewing techniques
List the steps for radiographic film mounting and proper viewing techniques

13. Explain radiographic quality assurance techniques

Learning Objectives

Describe radiographic quality assurance principles and functions
List quality assurance tests, procedural steps and functions
Identify quality assurance administration plan and requirements

14. Discuss radiographic image interpretation

Learning Objectives

Identify basic radiographic image interpretation concepts
List correct terms used when interpreting images
Describe images using the proper method of interpretation

15. Classify radiographic image pathologies, trauma, injuries and periodontal lesions

Learning Objectives

Describe dental caries and periodontal disease progression
Define dental trauma, injury and periapical lesions
List pathological radiographic images and classifications
Recognize dental pathology on radiographic images

16. Apply Bloodborne Pathogens standards

Learning Objectives

Discuss hazardous waste protocol
Incorporate Bloodborne Pathogen standard in labs
Implement Hazardous Waste protocol
Utilize Bloodborne Pathogen exposure prevention methods

SCC Accessibility Statement

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