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

<table>
<thead>
<tr>
<th>Instruction Type</th>
<th>Credits/Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>2 / 32</td>
</tr>
<tr>
<td>Laboratory</td>
<td>1 / 32</td>
</tr>
</tbody>
</table>

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**
South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request and discuss accommodations. North Mankato: Room B-132, (507) 389-7222; Faribault: Room A-116, (507) 332-7222.

Additional information and forms can be found at: [www.southcentral.edu/disability](http://www.southcentral.edu/disability)

This material can be made available in alternative formats by contacting the Academic Support Center at 507-389-7222.