



Dental Assisting Radiography (DAR) Examination Content Outline

	Work Area	Number of Items	Percentage of Exam
I.	Principles of Dental Radiography	33	33%
II.	Imaging Techniques and Evaluation	26	26%
III.	Radiograph Processing	9	9%
IV.	Radiation Safety and Legal Considerations	23	23%
V.	Infection Control	9	9%
	Total	100	100%

I. Principles and Theory of Dental Radiography (33%)

A. Terminology

- Define basic terms, nomenclature, and anatomy

B. Fundamental concepts

- Know basic radiographic principles (X-ray production)
- Know the characteristics of different radiation types
- Know the process by which radiographic images are produced
- Know characteristics and parts of dental radiographic equipment
- Employ proper collimation and filtration
- Employ procedures to minimize radiation exposure
- Know quality assurance procedures required in dental radiography

C. Analogue (film) radiography

- Know characteristics and uses of dental radiographic films
- Know fundamental concepts of analogue (film) radiograph handling

D. Digital radiography

- Know fundamental concepts associated with digital radiograph handling
- Understand advantages of digital dental radiography compared to film
- Understand differences between digital sensors and phosphor plates, and the benefits and disadvantages of each

E. Cone beam computed tomography

- Know principles applied in cone beam computed tomography

II. Imaging Techniques and Evaluation (26%)

A. Imaging Techniques

- Select appropriate dental radiographic film, film holder, and cassette
- Position film for bisecting and paralleling techniques (for periapical and bitewing projections)
- Employ correct projection angle and exposure settings for bisecting and paralleling techniques
- Perform radiographic procedures and operate equipment using paralleling and bisecting angle techniques
- Produce acceptable radiographic images (analogue and digital) including periapical, bitewing, occlusal, panoramic, and cephalograms
 - Intraoral imaging
 - Extraoral imaging
- Employ quality assurance procedures in production of radiographs
- Instruct and manage patients (observe patient reaction and modify procedure to ensure comfort; answer patient safety questions)

B. Image Evaluation

- Know fundamental radiograph attributes (contrast, density, definition, and distortion) and recognize characteristics of an acceptable image
- Recognize fundamental radiograph anomalies (image distortion, fogging, cone cutting, foreshortening, overlapping, and elongation)
- Evaluate errors in placement, exposure, and processing for digital and analogue images
- Know radiographic error causes and perform error correction procedures

C. Landmarks

- Identify and use anatomical landmarks in dental radiography

III. Radiograph Processing (9%)

A. Manual and Automatic Film Processing

- Possess basic understanding of manual and automated film processing methods
- Employ quality assurance procedures in processing radiographs

B. Digital Image Processing

- Understand digital radiographic image processing
- Understand sensor/plate placement



IV. Radiation Safety and Legal Considerations (23%)

A. Safety requirements and equipment

- Know importance and effects of radiation, including scatter, high- and low-dose radiation effects
- Define ALARA (*as low as reasonably achievable*) as applied to dental radiography
- Employ recommended procedures to ensure patient safety with respect to radiation hazards
- Employ recommended procedures to ensure operator safety with respect to radiation hazards
- Employ appropriate radiation monitoring devices

B. State and federal radiation safety laws and regulations

- Comply with state and federal laws concerning dental radiation
- Comply with state and federal laws regarding storage and disposal of chemical agents
- Know legal aspects pertaining to transfer and retention of radiographs

V. Infection Control (9%)

A. Film Exposure

- Practice infection control and prevention during film exposure

B. Digital Exposure

- Practice infection control and prevention when employing sensors and phosphor plates

Task Inventory Note

The tasks included in this inventory are considered by American Medical Technologists to be representative of the dental assisting radiographer's job role. This document should be considered dynamic, to reflect the dental assisting radiographer's current role with respect to contemporary health care.