
| | |
|----------------------------|---------------------------|
| COURSE PREFIX/NO | DAT 127 |
| COURSE TITLE | Dental Radiography |
| LEC HRS/WEEK | 3.0 |
| LAB HRS/WEEK | 3.0 |
| CREDIT HRS/SEMESTER | 4.0 |

[Distance Learning Attendance/VA Statement](#)
[Textbook Information](#)

COURSE DESCRIPTION

This course provides the application of the principles of radiology with emphasis on exposing, processing, mounting, evaluating, and interpreting dental radiographs. Radiation safety is stressed.

LEARNING OBJECTIVES

Upon the successful completion of DAT 127, the student is expected to have a thorough comprehension of and be competent to perform the following objectives within the four modules:

Module I – Radiation Basics

1. Radiation History
2. The basic principles and concepts of radiation in general and x-radiation in particular.
3. The component parts and workings of the Dental X-ray Machine and the production of x-rays.
4. Radiation and Image Characteristics
5. Radiation bio-effects, health, and safety.
6. The effects of ionizing radiation on living tissues.
7. Radiation protection procedures for the operator and the patient.

Module II – Film and Processing

1. Technique of proper film processing, handling, and record keeping.
2. Quality assurance procedures.
3. Legal issues related to dental radiography.

Module III – Technique Basics

1. Factors affecting the quality of the x-ray beam and the radiographic image.
2. Intraoral techniques for bitewings, occlusal films, and periapicals including currently accepted methods, but emphasizing the paralleling technique for periapicals.
3. Panoramic radiography and other extraoral radiographic techniques with instruction in interpretation as appropriate.
4. Supplementary techniques and patient management including endodontic, localization, edentulous, pedodontic, and techniques for difficult anatomy and patients with disabling conditions.

5. Selection of appropriate radiographic surveys, film types, duplicating, and record keeping.
6. Alternate imaging modalities.

Module IV – Normal Anatomical Landmarks and Film Mounting

1. The appearances of normal radiographic landmarks, artifacts, and shadows.
2. Developmental abnormalities and basic disease process of teeth and supporting structures.
3. Viewing techniques and principles of interpretation.

COURSE REQUIREMENTS

In order to successfully complete DAT 127, the student is required to fulfill the following requirements:

1. Attend lecture and all lab sessions
2. Complete all reading assignments
3. Perform all laboratory tasks to a satisfactory level
4. Complete any assigned activities
5. Take all written tests with a grade average of 70% or better
6. Expose required films with a grade of 80% or better on bitewing and full mouth series.
All films averaged together must be a grade of 70% or better.
7. Follow the clinic dress code of the Dental Health Professions Department.

ATTENDANCE

If students are absent for more than 10% of the scheduled classes, they may be withdrawn. Three absences constitute one absence.

COURSE IMPLEMENTATION

Methods of instruction used to present course material include:

Didactic:

- *Lecture
- *Discussion/Problem Solving
- *Role Playing/Decision making
- *Reading Assignments - to be done prior to each class
- *Audiovisuals, Power Point Presentations
- *Internet and Computer Assisted Instruction

Clinical:

- *Repetitive practice in a learning environment with mannequin and patient practice
- *Self-assessment/problem solving
- *Faculty instruction and demonstration of clinical procedures

CLINICAL PORTION OF COURSE

Each student is required to purchase two (2) boxes of size two (2) Kodak Film. This item is to be purchased from Smartpractice.com and must be brought to the first

clinical radiology session. Students must have film purchase verified by course instructor.

Each student will be given an opportunity to practice each graded component of this course. The lab grade will be comprised of the following:

- I. Mannequin Series:
 1. Bitewing series
 - a. 2 vertical bitewing series (4 film each)
 - b. 2 horizontal bitewing series (4 film each)
 - c. 2 series of 7 vertical bitewings
 2. Five full mouth series
 - a. 2 XCP
 - b. 2 Stabe
 - c. 1 bisecting the angle
- II. Patient Series:
 1. 1 adult FMS
 2. 2 bitewing series
 3. 1 panoramic (required, not graded)
- III. Other: on mannequin: (Required, not graded)
 1. 4 occlusal films (2 maxillary, 2 mandibular)

Remember: Students must achieve a 70% in the lecture and 70% in the lab portions of this course in order to pass the course. Both lecture and Lab must be passed independently.

Grading Scale

| | |
|------------|---|
| 90 - 100 = | A |
| 80 - 89 = | B |
| 70 - 79 = | C |
| 60 - 69 = | D |
| Below 60 = | F |

NOTE: A final grade of C (70%) or above is required to continue in the DAT program.

Disabilities Statement: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Offices (SR) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.