

SOUTHEAST COMMUNITY COLLEGE
HEALTH SCIENCES DIVISION
DENTAL ASSISTING
Revision Date: 11/2023

I. CATALOG DESCRIPTION

Course Number: DENT 1315
Course Title: Oral Radiography
Prerequisite(s): DENT 1116

Catalog Description: Extensive study in oral radiography including: legal and ethical responsibilities, recognizing a diagnostic quality radiograph, production of radiographs, biological effects of radiation, and processing of images. Laboratory projects including extra-oral panoramic radiographic exposure, intra-oral exposures using direct and indirect digital imaging techniques. Emphasis placed on diagnostic quality of an image, infection control practices and patient management. Course begins with laboratory emphasis on DXTTR manikin and continues with human patient competencies.

Credit Hours: 3.5
Class Hours: 38
Lab Hours: 45
Total Contact Hours: 83

II. COURSE OBJECTIVES: *Course will:*

1. Introduce dental x-ray equipment, dental film, receptor holders, and digital sensors.
2. Introduce legal and ethical responsibilities associated with radiographic exposures and mounting.
3. Introduce the technique to achieve and interpret diagnostic quality exposures: intraoral and extraoral.
4. Discuss health and safety precautions for both the patient and the dental team regarding ionizing radiation.
5. Discuss processing of a traditional film with chemical solutions and quality control.
6. Discuss and demonstrate scanning of a Phosphor Storage Plate and quality assurance.
7. Discuss and demonstrate infection control skills when exposing and handling image receptors.
8. Understand and demonstrate how to schedule patients and prepare them for radiographic exposures.
9. Understand and demonstrate skills of patient education, patient management, pediatric radiography and other auxiliary radiographic techniques.
10. Demonstrate proficiency exposing radiographs on adult & pediatric patients.
11. Prioritize and demonstrate infection control skills during exposure & handling of radiographs on patients.

Note: Unit objectives are located in the learning management system within each unit of study.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *The student will be able to:*

1. Understand legal and ethical responsibilities associated with exposure of dental radiography.

2. Identify the rationale and criteria for a radiograph of diagnostic quality.
3. Describe the production and biological effects of ionizing radiation and understand the precautions needed to protect the patient and dental team.
4. Identify and effectively operate dental x-ray and digital imaging equipment.
5. Learn about processing solutions, ways to effectively generate radiographs using quality control, and environmentally correct techniques and scanning devices for PSP's.
6. Consistently demonstrate infection control skills when exposing and handling receptors for the dental imaging procedures.
7. Mount, interpret, and grade radiographic images according to specified diagnostic criteria.
8. Demonstrate proficiency appointing patients and preparing them for radiographic exposures.
9. Demonstrate competency-exposing radiographs on adult and pediatric patients.
10. Practice patient education and patient management.
11. Practice a variety of Pediatric images and auxiliary radiographic techniques (occlusals, vertical BWX, and extra oral).
12. Demonstrate professionalism and infection control skills during the handling of imaging receptors.

B. GENERAL EDUCATION LEARNING OUTCOMES

GELO 3: Critical Thinking and Problem Solving

Outcomes: Collect, identify, interpret and analyze data.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

1. Foundations of Radiography
 - History
 - Physics
 - Biological Effects
2. Image production and Infection Control
 - Equipment
 - Production
 - Infection control techniques
3. Intra-oral Receptors, Holders, and Processing a Traditional Film
 - Conventional Radiographs
 - Digital Radiographs (PSP and CCD)
4. Intra-oral Imaging
 - Traditional film & digital imaging techniques
 - Evaluation images for diagnostic value
 - Mounting dental images, assessment of errors and pathology
5. Patient Care
 - Patient Education
 - Patient Management
6. Auxiliary imaging
 - Extra-oral imaging
 - Occlusal imaging
 - Panoramic Imaging
 - 3D imaging

V. INSTRUCTIONAL MATERIALS REQUIRED

A. Required Text(s):

Bird and Torres. *Modern Dental Assisting* (current edition). Saunders. (textbook)
Bartdomucci, B. *Dental Instrument Pocket Guide* (current edition). Saunders.
Stuhr. *Modern Dental Terminology Online* (current edition) Saunders (online-text).

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Demonstration
3. Handout Materials
4. Class Participation/Presentations
5. Case Studies and Group Work
6. Power Point slides and videos
7. Activity worksheets
8. Engaged learning activities

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of assignments, quizzes, exam, projects, skill checkoffs, etc. For grading expectations, please see the course information document.

SCC STANDARD GRADING SCALE POLICY:

A+	95-100	C+	75-79
A	90-94	C	70-74
B+	85-89	D+	65-69
B	80-84	D	60-64
		F	Below 60

VIII. SPECIFIC COURSE REQUIREMENTS

A. ATTENDANCE

Attendance is crucial to the success of this course. Any class missed could mean valuable missed information, which is difficult to obtain. Please notify the instructor of any pending absences or if you will be late prior scheduled time. See program manual for all program policies.

Please see course information document for course policies related to grading, expectations, assignments, assessments, and participation.