

NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
DNH 130 - ORAL RADIOGRAPHY FOR THE DENTAL HYGIENIST (2 CR.)

Course Description

This course presents a study of physics, biology, safety, and exposure techniques for intra- and extra-oral radiographic surveys. Laboratory provides practice in exposure, processing methods, mounting, and interpretation of normal findings. Lecture 1 hours per week. Laboratory 3 hours per week. Total 5 hours per week.

General Course Purpose

This course provides students with the fundamental background and theory for the safe and effective use of x-ray radiation. Laboratory sessions emphasize the placement, exposing, processing, mounting, and interpretation of dental radiographs.

Course Prerequisites/Corequisites

Prerequisites: ENG 111, NAS 162, NAS 162, SDV 101.

Corequisites: DNH 111, DNH 115, DNH 141.

Course Objectives

Upon completing the course, the student will be able to:

- a) Discuss the principles of x-ray physics and x-ray production.
- b) Discuss the characteristics and effects of x-ray radiation.
- c) Discuss methods of radiation exposure and the importance of patient education.
- d) Discuss the components, types, sizes, speeds, and uses of dental x-ray films.
- e) Discuss the methods and the chemicals used for processing dental x-ray films.
- f) Discuss the importance of quality assurance and quality control.
- g) Describe and identify anatomical landmarks and structures of the maxillae and mandible.
- h) Describe and identify radiographic anomalies and pathology.
- i) Describe and recognize types of radiographic errors.
- j) Describe and demonstrate basic positioning of the patient, x-ray film, and x-ray tube for the paralleling and bisecting angle techniques.
- k) Demonstrate the ability to utilize the paralleling and bisecting angle techniques when exposing dental radiographs.
- l) Demonstrate the ability to place, expose, process, mount, and interpret dental radiographs.
- m) Demonstrate the ability to expose a full mouth series, a bite-wing series, and an occlusal survey on a manikin.
- n) Demonstrate the ability to expose a full mouth series on adult patients.
- o) Demonstrate the ability to expose a bite-wing series and a panoramic radiograph on a pediatric patient.
- p) Demonstrate the ability to expose a panoramic radiograph on an edentulous or partially edentulous patient.
- q) Discuss the importance for practicing proper methods of infection control when exposing and processing radiographs.

Major Topics to be Included

- a) Principles of X-Ray Physics

- b) The X-Ray Machine, Components, and Function
- c) Principles and Characteristics of X-Ray Production
- d) Effects of Radiation Exposure
- e) Methods of Radiation Protection and Patient Education
- f) Dental X-Rays Films
- g) Processing of Dental X-Ray Films
- h) Quality Assurance and Quality Control
- i) Infection Control Methods in Dental Radiography
- j) Intraoral Radiographic Anatomy
- k) Radiographic Anomalies and Pathology
 - o Identification of Radiographic Errors
- l) Intraoral and Extraoral Radiography
- m) Radiography for the Pediatric and Edentulous Patient
- n) Advances in Dental Radiography