

21 NCAC 16H .0105 DENTAL RADIOLOGY COURSE AND EXAMINATION REQUIREMENTS

(a) If a dental radiology course and the course's final examination meet the requirements of this Rule, the Board will recognize the course and final examination as satisfying the dental radiology training and equivalency examination requirements set out in G.S. 90-29(c)(12).

(b) For the Board to recognize a dental radiology course and its final examination:

- (1) The course shall include at least 7 hours of didactic, lecture-based instruction and at least 14 hours of laboratory instruction.
- (2) The course curriculum shall include instruction and training in clinical dental radiology, in the production and use of dental x-rays, and on digital x-ray equipment. The course shall enable the student to:
 - (A) identify in sequence the steps necessary for operating dental x-ray equipment;
 - (B) identify the requirements of a diagnostic digital image;
 - (C) differentiate the effect of variations in amperage, kilo-voltage, distance, and exposure time on the resulting digital images;
 - (D) identify the terms used to measure radiation;
 - (E) establish guidelines for maintaining radiation safety and the ALARA ("as low as reasonably achievable") principle;
 - (F) follow principles of radiologic health practices and radiation biology;
 - (G) identify radiation safety techniques and monitoring devices;
 - (H) identify the parts and identification marks on dental x-ray sensors;
 - (I) identify and compare intraoral sensors according to size and customary usage;
 - (J) identify methods of sensor handling and storage;
 - (K) identify and perform in sequence the steps in processing digital images;
 - (L) differentiate between preliminary interpretation and diagnosis of the digital images;
 - (M) identify the anatomical landmarks of the face and skull;
 - (N) identify any dental radiograph according to its location in the maxilla or mandible, and position it on a digital image mount;
 - (O) identify the types of radiographic errors caused by faulty exposure techniques;
 - (P) identify the types of radiographic errors caused by incorrect digital mount positioning and angulation of the central ray;
 - (Q) identify the types of radiographic errors caused by faulty digital processing techniques;
 - (R) identify the conditions that cause digital images to be fogged;
 - (S) identify the advance preparations necessary before exposing digital images;
 - (T) carry out the task of digital image exposure to completion;
 - (U) use the paralleling technique to produce digital images of diagnostic quality addressing contrast, density, and definition;
 - (V) explain the principles of digital imaging and quality assurance;
 - (W) identify errors when using digital imaging in technique and processing;
 - (X) explain the utilization of beam aligning devices; and
 - (Y) describe the use of hand-held radiation exposure devices following guidelines from the Radiation Protection Section of the Department of Health and Human Services, Radiology Compliance Branch ("Radiation Protection Section"), which are incorporated by reference, including subsequent amendments and editions, and are available at no cost online at www.ncradiation.net/Xray/dentdose.htm.
- (3) The laboratory portion of the course shall have no more than six students per instructor, and shall include practice on dental radiography manikins. Students shall not practice on peer students unless the unit is turned off and all requirements of the Board's sterilization and infection control rule, 21 NCAC 16J .0103, are satisfied. Students shall be required to achieve a passing score of at least 80 percent on a written examination on radiation safety prior to taking radiographs.
- (4) To complete the course, students shall be required to achieve a passing score of at least 80 percent on a written examination upon completion of the didactic, lecture-based portion of the course and to achieve a passing score of at least 80 percent on a final laboratory examination. The final laboratory examination shall be conducted on a manikin and include completion of a full mouth series.
- (5) The facility used as the training location for the course shall:
 - (A) assume all overhead costs involved in offering the course;

- (B) comply with the Board's rules regarding sanitation, sterilization, and infection control set out in 21 NCAC 16J, the applicable guidelines of the Radiation Protection Section, and the OSHA guidelines and standards related to dentistry, which are incorporated by reference, including subsequent amendments and editions, and are available at no cost online at www.osha.gov/dentistry/standards;
 - (C) provide access to a room large enough to accommodate the number of participants for lecture purposes;
 - (D) have the number of x-ray machines necessary based on the course curriculum and enrollment to ensure there are no more than two students per machine; and
 - (E) have facilities for digital radiography.
- (6) The didactic and laboratory portions of the course shall be taught by:
- (A) an instructor of dental radiography at an institution accredited by the Commission on Dental Accreditation ("CODA"), a list of which is available at no cost at www.ada.org/coda and is incorporated by reference, including subsequent amendments and editions; or
 - (B) an instructor who has received a certification to teach dental radiography from a CODA-accredited institution, and has completed three hours of continuing education in the area of radiology every other year. The continuing education courses shall be offered by Board-approved continuing education course sponsors as set out in 21 NCAC 16I .0202 or 21 NCAC 16R .0202.
- (7) The course sponsor shall provide students with all supplies.
- (8) Course advertising shall comply with the Board's rules regarding advertisement of dental services set out in 21 NCAC 16P.
- (c) A course sponsor seeking Board recognition of a dental radiology course shall submit to the Board office:
- (1) the course outline, syllabus, and handouts;
 - (2) slides and other lecture materials;
 - (3) examinations and grading criteria; and
 - (4) the name, resume, and verification of credentials satisfying Subparagraph (b)(6) of this Rule for all course instructors.
- (d) After the course sponsor submits all the information and documents required by Paragraph (c) of this Rule, the course will be reviewed by the Board for compliance with this Rule at the next scheduled Board meeting. The Board may delay reviewing a course until a later meeting if the Board's workload makes the review impracticable. If the Board delays reviewing a course, it shall notify the course sponsor. A course shall be recognized by a majority vote of the Board. A list of recognized courses is available on the Board's website at www.ncdentalboard.org.
- (e) Upon receipt of evidence that a previously recognized course is not in compliance with this Rule, the Board will notify the course sponsor in writing of each item of noncompliance. Within 30 days from the date of the notice of noncompliance, the course sponsor shall provide a written response to the Board office which shall respond to each item of noncompliance. The response shall provide documentation of corrections made, and shall show each item is in compliance with this Rule. If the course sponsor fails to respond or correct noncompliance, the Board's recognition of the course shall be withdrawn. As of the date recognition is withdrawn, the course and its examination shall not satisfy the dental radiology training and equivalency examination requirements set out in G.S. 90-29(c)(12).

History Note: Authority G.S. 90-29(c)(12); 90-48;
Eff. July 1, 2023.