



Dental Radiography – DENT 135

Certified Dental Assisting Program

Course Outline

COURSE IMPLEMENTATION DATE: Pre 1998
OUTLINE EFFECTIVE DATE: September 2023
COURSE OUTLINE REVIEW DATE: April 2028

GENERAL COURSE DESCRIPTION:

This course introduces students to the basic science of radiation including its discovery, history and modern use within the dental profession. Participants study the necessary equipment and supplies for the various types of dental images that are utilized in the dental profession. This course teaches students to critique radiographic images and explain the cause and effect of various equipment and armamentaria adjustments. Students review tips for gaining patient cooperation and a variety of techniques for exposing radiographic images intra- and extra-orally. The course will focus on digital radiography with a brief overview of the evolution of dental x-rays from film-based radiography to digital sensor radiography. Students will identify and describe anatomical landmarks and dental anomalies on radiographic images, including whether they are radiolucent or radiopaque. Quality assurance and the “As Low As Responsibly Acceptable” (ALARA) principle are also addressed. Participants study the biological effects of radiation exposure on patients and staff, and the purpose, equipment, and processes for radiation monitoring.

Program Information: This is a required course for successful completion of the Certified Dental Assisting program.

Delivery: This course is delivered face to face.

COTR Credits: 3

Hours for this course: 33

Typical Structure of Instructional Hours:

Instructional Activity	Duration
Lecture Hours	33
Seminars / Tutorials	
Laboratory / Clinical Hours	90*
Practicum / Field Experience Hours	
Other Contact Hours	
Total	123
*Refer to DENT 154 Course Outline	

Practicum Hours (if applicable):

Type of Practicum	Duration
On-the-job Experience	N/A
Formal Work Experience	N/A
Other	N/A
Total	

Course Outline Author or Contact:

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Signature

APPROVAL SIGNATURES:

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EDCO

Valid from: September 2023 – April 2028

Education Council Approval Date

COURSE PREREQUISITES AND TRANSFER CREDIT:

Prerequisites: None

Corequisites: None

Flexible Assessment (FA):

Credit can be awarded for this course through FA

Yes No

Transfer Credit: For transfer information within British Columbia, Alberta and other institutions, please visit <http://www.cotr.bc.ca/Transfer>.

Students should also contact an academic advisor at the institution where they want transfer credit.

Prior Course Number: N/A

Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

Elsevier Saunders (Bird and Robinson), *Modern Dental Assisting*, 13th Edition,
ISBN 978-0-323-62485-5

Elsevier Saunders (Boyd), *Dental Instruments: A Pocket Guide*, 7th Edition,
ISBN 978-0-323-62743-6

DENT 135 Module

Please see the instructor's syllabus or check COTR's online text calculator
<https://textbook.cotr.bc.ca/> for a complete list of the currently required textbooks.

LEARNING OUTCOMES:

Upon the successful completion of this course, students will be able to

- explain the principles of x-ray production;
 - practice adequate radiation hygiene when using ionizing radiation in the dental office;
 - identify the types of equipment and sundries necessary to produce radiation and diagnostic radiographs used for digital radiography;
 - expose, process, and mount radiographs;
 - identify the characteristics of radiographs for the purpose of diagnosis;
 - demonstrate techniques and tips in the skills of patient management during radiography sessions;
 - describe various exposure techniques necessary for radiographic exposure;
 - identify the anatomical landmarks necessary for the correct mounting and diagnosis of radiographs; and
 - describe the need for and techniques of quality assurance.
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COURSE TOPICS:

- X-ray Production
 - History of Dental Radiography
 - X-ray Equipment and Supplies
 - Characteristics of Radiographic Images
 - Radiation Hygiene
 - Patient Care for Dental Radiography
 - Radiographic Techniques and Alternate Imaging Methods
 - Radiographic Landmarks and Mounting
 - Explain Quality Assurance for Dental Radiography
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EVALUATION AND ASSESSMENT:

Assignments	% Of Total Grade
Quizzes, Worksheets and Assignments	20%
Case Study	20%
Final Exams	
Units 1, 2, 3, 4 and 5	30%
Final Exams	
Units 6, 7, 8 and 9	<u>30%</u>
Total	100%

Please see the CDA Program Student Handbook for specific policies related to this course.

CLINICAL:

Elements of DENT 135, particularly course learning outcomes #2-8, correspond to DENT 154 practical objectives:

- Expose Dental Radiographs
 - Upload Dental Radiographs to Patient Record
 - Evaluate Radiographic Images
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EXAM POLICY:

Students must attend all required scheduled exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

COURSE GRADE:

Course grades are assigned as follows:

Grade	A+	A	A-	B+	B	B-	F
Mark (Percent)	≥ 95	94- 90	89- 85	84- 80	79- 75	74- 70	< 70

Students must achieve an overall grade of 70% to pass this course.

ACADEMIC POLICIES:

See www.cotr.bc.ca/policies for general college policies related to course activities, including grade appeals, cheating and plagiarism.

COURSE CHANGES:

Information contained in course outlines is correct at the time of publication. Content of the courses is revised on an ongoing basis to ensure relevance to changing educational, employment and marketing needs. The instructor will endeavour to provide notice of changes to students as soon as possible. The instructor reserves the right to add or delete material from courses.