Douglas College

# EFFECTIVE: SEPTEMBER 2004
# CURRICULUM GUIDELINES

| | | | | | |
|---|---|---|---|---|---|
| **A.** | Division: | **Instructional** | Effective Date: | | **September 2004** |
| **B.** | Department / Program Area: | **Health Sciences** | Revision | **X** | New Course |
| | | | If Revision, Section(s) Revised: | | **C, J, M, N, R** |
| | | | Date of Previous Revision: | | **September 5, 2000** |
| | | | Date of Current Revision: | | |

**C:** **CHDA 1107** **D:** **Dental Radiology Theory** **E:** **1.5**

Subject & Course No. | Descriptive Title | Semester Credits

**F:** Calendar Description:

The purpose of this course is to help the student develop an understanding of the basic principles of clinical dental radiography. Current radiographics techniques will be covered with the emphasis being on safe and effective use of x-rays in dental practice.

**G:** Allocation of Contact Hours to Type of Instruction / Learning Settings

Primary Methods of Instructional Delivery and/or Learning Settings:

**Lecture**

Number of Contact Hours: (per week / semester for each descriptor)

**30 per semester**

Number of Weeks per Semester: **15**

**H:** Course Prerequisites:

NIL

**I:** Course Corequisites:

NIL

**J:** Course for which this Course is a Prerequisite

CHDA 1217

**K:** Maximum Class Size:

30

**L:** PLEASE INDICATE:

- [ ] Non-Credit
- [X] College Credit Non-Transfer
- [ ] College Credit Transfer:

SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)

**M:** Course Objectives / Learning Outcomes

The learning outcomes are based on the Curriculum Guide 2001 Education of Certified Dental Assistants in British Columbia developed for the Ministry of Advanced Education, Training and Technology and the Centre for Curriculum, Transfer and Technology, February 2001.

Upon successful completion of CHDA 1107 the student will be able to:

1. explain x-ray generation and its use in dentistry.
2. explain the operation of radiographic equipment.
3. explain radiation hygiene.
4. outline use and care of dental x-ray films and holders.
5. explain infection control procedures in radiography.
6. explain exposure techniques.
7. process dental films.
8. mount dental films and describe landmarks.
9. discuss quality assurance.

**N:** Course Content:

1. **X-ray Generation**

   Electromagnetic radiation
   X-ray production
   Beam quality
   Beam quantity

2. **Dental X-ray Exposing Equipment**

   Machine components
   Safety features
   Operation and maintenance of intra oral machines
   Operation and maintenance of panoramic/cephalometric x-ray machines
   Digital Radiography equipment

3. **Radiation Hygiene**

   Rational for Radiographs in dentistry
   Measurement of radiation
   Principles of protection
   Radiation monitoring
   Biological hazards
   Quality assurance protocols

4. **X-ray Film and Holders**

   Dental radiographic films, intra oral and extra oral
   Film holders
   Principles of storage
   Film selection

5. **Infection Control**

   Infection control significance
   Barriers

Course Content Continued:

6. **Exposure Techniques**

Exposure planning
Intra oral film placement
Bisecting angle technique
Paralleling technique
Bitewing technique
Technique modifications
Panoramic technique

7. **Process Dental Films**

Dark room requirements
Image formation
Processing chemicals
Manual processing
Automatic processing
Rapid processing
Storage requirements
Process dental radiographs

8. **Landmarks and Mounting**

Image characteristics
Radiographic appearance
Normal landmarks
Deviations from normal
Film mounting

**O:** Methods of Instruction

1. Lecture
2. Class discussion/participation
3. Audio-visual materials

**P:** Textbooks and Materials to be Purchased by Students

* Torres, H.O., and Ehrlich, A., Bird, D. & Dietz, E., Modern Dental Assisting, (latest edition). Philadelphia: W.B. Saunders Co.

* Wilkins, E.M., Clinical Practice of the Dental Hygienist, (latest edition). Philadelphia: Lea and Febiger.

Haring, J.I. and Jansen, L., Dental Radiography Principles and Techniques (latest edition). Philadephia: W.B. Saunders Co.

* **Same texts used in all courses of Dental Assisting Program.**

**Q:** Means of Assessment

Course evaluation is based on course objectives, and is consistent with Douglas College Evaluation Policies. An evaluation schedule is presented to the student at the beginning of the course.

A minimum mark of 65% is required to be successful in the course.

Outlines of evaluation may be subject to change.

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| **R:** | Prior Learning Assessment and Recognition: specify whether course is open for PLAR<br><br>Yes |

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|---|---|
| Course Designer(s) | Education Council / Curriculum Committee Representative |
| Dean / Director | Registrar |