COURSE NO., HOURS AND TITLE: DH 218-2 Dental Hygiene Radiology I

INSTRUCTOR: TBD

INSTRUCTOR CONTACT INFORMATION:
Telephone: TBD
E-mail: TBD
Office Location: TBD
Office Hours: TBD

COURSE DESCRIPTION:
The student is introduced to principles of radiation biology and protection, x-ray production, image formation, and intraoral radiographic techniques. Lecture two hours. Length of course: 16 weeks. Must be concurrently enrolled in DH 218L. Restricted to DH majors only and approval from the School of Allied Health or the DH program.

COURSE OBJECTIVES:
Upon completion of this course, the student will be able to:
1. Differentiate the types and principles of ionizing radiation and how the concepts link to clinical practice.
2. Identify all the parts of the dental x-ray unit including the control panel, the properties of the beam and how the beam generates energy.
3. Describe the concept of image formation and factors that influence image formation.
4. Discuss the history of image receptors, film definition, and the need for intensifying screens in dentistry.
5. Illustrate the biological effects of radiation and how they influence clinical dental hygiene and radiology.
6. Investigate the proper ways to limit radiation exposure to patient and operator and receive quality diagnostic images.
7. Explore the darkroom/processing radiographs using video instruction and recognize processing errors.
8. Recognize technique errors and how to remedy these errors.
9. Discriminate between a quality set of bitewing radiographs using the vertical and horizontal technique.
10. Recognize basic information seen used in radiographic interpretation.

CONTENT OUTLINE:

<table>
<thead>
<tr>
<th>Topics</th>
<th>Percentage of Time</th>
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</thead>
<tbody>
<tr>
<td>I. Radiation History (self-study)</td>
<td>0%</td>
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<tr>
<td>II. Dental X-ray Equipment</td>
<td>8%</td>
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</tbody>
</table>
III. Bite-wing Technique 8%
IV. Paralleling Technique 16%
V. Mounting/Viewing 8%
VI. Introduction to Radiographic Examinations (self-study) 0%
VII. Radiation Physics 8%
VIII. Radiation Characteristics 8%
IX. Exposure and Technique Errors 16%
X. Radiation Biology 16%
XI. Radiation Protection 8%
XII. Dental X-Ray Film Processing 8%
XIII. Normal Anatomy: Intraoral Images 16%
XIV. Quality Assurance in the Dental Office 8%
XV. Dental Radiographs and the Dental Radiographer 8%
XVI. Dental X-Ray Film 8%
XVII. Dental X-Ray Image Characteristics 8%
XVIII. Patient Relations and the Dental Radiographer 8%
XIX. Patient Education and the Dental Radiographer 8%
XX. Introduction to Image Interpretation 5%
XXI. Descriptive Terminology 8%
XXII. Radiology Jeopardy & Review for Final Exam 8%

**TEXTBOOK:**
Required: