

**WEST LOS ANGELES COLLEGE
DEPARTMENT OF DENTAL HYGIENE**

- I. DH 212: INTRODUCTION TO RADIOLOGY - LECTURE
- II. PREPARED BY: DENTAL HYGIENE FACULTY
- III. REVISED FOR: FALL 2015
- IV. PREREQUISITE: OPEN TO MATRICULATED DENTAL HYGIENE STUDENTS ONLY
- V. UNITS AND HOURS: 1 UNIT, 1 HOUR - MONDAYS FROM 11:15AM – 12:20PM
- VI. COURSE INSTRUCTOR: JOY OGAMI AVILA, R.D.H., M.S.
OFFICE HOURS: TUESDAYS 10:05AM – 12:05PM OR BY APPOINTMENT
EMAIL: jcogami@gmail.com
OFFICE PHONE: (310) 287-7221

VII. COURSE DESCRIPTION:

This course is a study of the principles of oral radiology and includes the techniques of exposing and processing quality dental radiographs. Emphasis is placed on recognition of normal anatomy and radiation safety.

VIII. REQUIRED TEXTS:

White, Stuart C. and Pharoah, Michael J. Oral Radiology Principles and Interpretation. Seventh edition Mosby 2014 ISBN: 978-0-323-09633-1

IX. SUGGESTED REFERENCES:

Pasler, F., Visser, H., Pocket Atlas of Dental Radiology, Thieme, 1st edition, 2007.

Iannucci, J. M., Howerton, L.J. Dental Radiography: Principles and Techniques
W. B. Saunders Company. 4th Edition (ISBN: 9781437711622)

X. WEST LOS ANGELES COLLEGE STUDENT LEARNING OUTCOMES

- A. Critical Thinking: Analyze problems by differentiating fact from opinions, using evidence, and using sound reasoning to specify multiple solutions and their consequences.

Assessment: The students will be able to understand and explain the risks and benefits of dental radiographic procedures and be able to identify normal and abnormal anatomic landmarks and restorations on radiographs on written examinations.

- B. Communication: Effectively communicate thought in a clear, well-organized manner to persuade, inform, and convey ideas in academic, work, family and community settings.

Assessment: The students will relate in a professional and competent manner with instructors, and peers. These skills will be evaluated by instructors through class participation activities.

XI. PROGRAM STUDENT LEARNING OUTCOMES ADDRESSED IN THIS COURSE:

Professionalism

Program SLO #2: Perform self-assessment for life long learning to provide evidenced-based practice of dental hygiene.

Program SLO #3: Understand and interpret the scientific literature and research as it relates to the evidence-based practice of dental hygiene.

Program SLO #4: Utilize current technology to enhance education, patient care, research and professional growth.

XII. COURSE OBJECTIVES:

As a result of the lectures, discussion and assigned readings the student on a written exam will be able to:

1. Describe the basic principles and concepts of radiation in general and x- radiation in particular
2. List the component parts and workings of the dental x-ray machine and the production of x-rays
3. Explain factors affecting the quality of the x-ray beam and the radiographic image
4. Describe the effects of ionizing radiation on living tissues
5. Describe radiation bioeffects, health and safety
6. List radiation protection procedures for the operator and the patient
7. Identify selection of appropriate radiographic surveys, film types, duplicating and record keeping
8. Describe intraoral techniques for bitewings, occlusal films and periapicals including currently accepted methods, but emphasizing the paralleling technique for periapicals images.
9. Describe supplementary techniques and patient management including endodontic, localization, edentulous, pedodontic and techniques for difficult anatomy and patients with disabling conditions
10. Explain technique of proper film processing, handling and record keeping
11. State quality assurance procedures
12. Describe viewing techniques and principles of interpretation
13. List alternate imaging modalities
14. Describe the appearances of normal radiographic landmarks, artifacts and shadows
15. Describe developmental abnormalities and basic disease processes of teeth and supporting structures
16. Discuss legal issues related to dental radiography
17. Display the ability to assess errors in radiographic processing and indicate methods of correcting them.
18. Explain alterations required in obtaining diagnostic quality radiographs when the patient's physical characteristics impose placement restrictions.
19. Integrate the bioeffects of ionizing radiation and contraindication for treatment in determining the amount of radiation a patient is to receive.
20. Evaluate the criteria for patient/operator radiation safety and select procedures which will provide maximum protection.

21. Consistently maintain accurate permanent records in the taking of radiographs in all laboratory exercises.

<p align="center"><u>Course SLO</u></p> <p>One sentence that describes a major piece of knowledge, skill, or ability that students can demonstrate by the end of the course</p> <p><i>Finish the sentence, "At end of the course, the successful student will be able to..."</i></p>	<p align="center"><u>Assessment Method</u></p> <p>Major assignment, project or test used to demonstrate or apply outcome</p> <p><i>Remember to have a mix of qualitative and quantitative assessment methods.</i></p>	<p align="center"><u>Criterion Level</u></p> <p>Reflects satisfactory performance on the SLO</p> <ul style="list-style-type: none"> • <i>At least X percent of students achieve this course SLO.</i> • <i>All students achieve at least the Y level on this SLO.</i> • <i>At least X percent of students achieve the Y level on this course SLO.</i>
<p>1. Demonstrate their ability to understand radiology concepts for successful imaging and to ensure patient safety.</p>	<p>Students will answer questions on a midterm and final examination that will be graded according to a scantron scanner.</p>	<p>At least 80% of students will correctly answer more than 75% of the examination questions.</p>
<p>2. Orally present on the topics of oral radiology.</p>	<p>Students will participate in an oral presentation during class that will be evaluated according to a grading rubric.</p>	<p>At least 80% of the students will achieve 75% of the points or more on this course SLO.</p>
<p>3. Effectively communicate their comprehension of radiographic vocabulary on class assignments.</p>	<p>Students will complete assignments that will be evaluated according to an answer key.</p>	<p>At least 80% of students will achieve a 75% or better on this course SLO.</p>

XIII. METHODS OF INSTRUCTION:

- Lecture
- Discussion
- Power Point Presentations
- Videos
- Assignments

XIV. METHODS OF EVALUATION:

Students will be evaluated on assignments, examinations and class participation. Class participation includes attendance, punctuality, and class participation

GRADING

2 Quizzes	20%
Assignments	10%
Midterm	30%
Final	40%

- Attendance to all lectures is required.
- Assignments turned in late will result in a deduction of 5 points for each day they are late.
- Unexcused absences will be handled in accordance with the West Los Angeles College's Attendance Policy. Twenty (20) points will be deducted for each unexcused absence. Points will also be deducted for tardiness,

talking or any other disruptive behavior during lecture or class activities (Points will be deducted from Class Participation).

Final Course Grade

Assigned as follows:

90-100%	- A
80-89%	- B
70-79%	- C
60-69%	- D

A minimum grade of C (70%) is required to be retained in the Dental Hygiene Program.

*Students may elect to test out of the laboratory portion of the course. 2 FMX product evaluations on patients (1 digital, 1 traditional) must be completed at a 70% or above on the first attempt to successfully test out of the radiology course. Course grades will then be based on the lecture portion of the course. Detailed instructions for testing out will be provided to those interested during the dental hygiene orientation.

Academic Integrity

Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect to others' academic endeavors. In evidence of cheating or plagiarism in classroom work, the instructor may assign a failing grade, "F" or zero points to the examination or assignment in which the alleged cheating or plagiarism occurred. Before a substandard grade is issued the instructor will provide the student with supporting documentation of the plagiarism or cheating charge. Instructors have the authority to use plagiarism detecting software, such as "Turn It In", or others, to detect academic dishonesty

- Cheating. Using any material or devices or strategies which provide undue advantages on any exam, assignment, activity or other method of assessment for a course. This includes, but not limited to, looking at another student's exam, using phones or other communication system to text message during exams, taking photos or images of exams, talking with others during exams, using Internet to find information, or any other system of inappropriate "help." Exams are to be measures of what YOU, as an individual, have learned.
- Collaboration. Working together on projects, papers, exams or other forms of assessment which are to be completed individually.
- Plagiarism. Taking anyone else's work as one's own Presenting another's words, ideas, forms of expression, materials, or labor without proper citation, referencing, and declaration that this material originated outside the student's own work.

GENERAL RULES:

Cell Phone and Other Communication Devices

If you bring your cell-phone to class, be sure to have it in a mode where it will not ring and disturb others. If you have to answer an emergency phone call, please step out of the classroom. Devices of this type should be placed on vibrate and never visible during class time.

Classroom and Campus Cleanliness

Please help us keep the classroom and campus grounds clean. No food or beverages, except for water, is permitted inside instructional classrooms / labs. Please use the receptacles and appropriate recycling containers to dispose of trash.

- If you are sick or in an emergency situation on the day of class, please call your instructor by 8 a.m. (310-287-4464 Leave message with the Allied Health Secretary) Please do not leave a message with your classmate.
- Student is required to bring all assigned instruments to each class and/or lab session.
- All reading, video and web assignments are to be done prior to class and/or lab. Failure to do this will reduce your ability to understand and learn the concept being presented.
- Please make use of your instructor's office hours. Your instructor is available for discussion on all course material during office hours and/ or by appointment.
- The best way to communicate with your instructors is email. Please save all the instructor's email addresses in your contacts.

DH 212 INTRODUCTION TO DENTAL RADIOLOGY - LECTURE

XV. COURSE CONTENT OUTLINE LECTURE SCHEDULE - FALL 2015

Note: The schedule is tentative and, therefore, subject to change depending upon the class progress. You are responsible for all the announcements and materials covered during your absence.

Date	Lecture Topic	Reading Assignment
8/31	Course Introduction Radiation History - Basic Dental Terminology	
9/7	Labor Day – No Class	
9/14	Radiation Physics Radiation Characteristics	Chapter 1
9/21	Quiz #1 Radiation Biology	Chapter 2
9/28	Radiation Safety and Protection	Chapter 3
10/5	Quality Assurance and Infection Control/Prescribing Radiographs	Chapters 15 and 16
10/12	Digital Imaging	Chapter 4
10/19	Quiz #2 Film Imaging	Chapter 5
10/26	Projection Geometry/ Intraoral Projections	Chapter 6 and 7
11/2	Intraoral Anatomy	Chapter 8
11/9	Extraoral Projections and Anatomy	Chapter 9
11/16	Midterm	
11/23	Panoramic and Other Imaging Modalities	Chapters 10 - 14
11/30	Image Interpretation Basics	Chapter 17
12/7	Radiographic Lesions	Chapters 18 – 31 (Work as class)
12/14	Final Examination	