

COURSE SYLLABUS

Course Title:	Principles of Radiation for the Dental Assistant	Date submitted:	November 2018 (AAC: 18-80)
Department:	BCAHM (Biology, Chemistry, Allied Health, Medical)		
Curriculum:	Dental Assisting		
Course Descriptors: Make certain that the course descriptors are consistent with college and Board of Trustees policies, and the current course numbering system.	Course Code: (eg. ACC 101)	DAS*148	Prerequisites: Dental Assisting Research Seminar (DAS*142)
	Course Type:	D/L	
	A: Clinical B: Lab D: Distance Learning I: Individual/Independent L: Lecture N: Internship M: Seminar P: Practicum U: Studio X: Combined Lecture/Lab Y: Combined Lecture/Clinical/Lab Z: Combined Lecture/Studio		
	Elective Type:	G	
	AH: Art History E: English FA: Fine Arts G: General HI: History HU: Humanities LA: Liberal Arts FL: Foreign Language M: Math S: Science SS: Social Science		
	Credit Hours:	3	Corequisites: Matriculation in the Dental Assisting Program
	Developmental: (yes/no)	No	
	Lecture:	3	
	Clinical:	0	
	Lab:	0	
Studio:	0		
Contact Hours:	0		
Other:	0		
	TOTAL:	3	
	Class Maximum:	24	Other Requirements: Current BLS/CPR for Health Care Professionals and First Aid Certification through a Dental Assisting National Board approved provider
	Semesters Offered:	F	
Catalog Course Description:	Focuses on the foundations of radiography, radiographic equipment and safety. Legal issues, quality assurance and infection prevention is also emphasized.		
Topical Outline: List course content in outline format.	1. Radiation history and radiology physics. 2. Radiation characteristics 3. The dental X-ray machine 4. X-ray production 5. Principles of image production 6. Types of radiation 7. Characteristics of X-ray beam 8. Radiation Biology (effects, measurement & safety) 9. Radiation protection and quality assurance 10. Radiographic identification of basic anatomic structures		

	<ol style="list-style-type: none"> 11. Radiographic interpretation and mounting. 12. Traditional film, processing, and errors 13. Patient education 14. Patient management 15. Infection prevention
<p>Outcomes: Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.</p>	<p>Upon successful completion of this course, the student will be able to do the following:</p> <ol style="list-style-type: none"> 1. explain ideal radiographic image production 2. mount a full mouth survey of dental images with 100% accuracy 3. identify normal radiographic anatomy, dental caries, bone loss, restorations, technique errors, and various findings; 4. describe the composition of X-ray film 5. describe the care and maintenance of the processing solutions, equipment, and equipment accessories used in manual and automatic film processing. 6. list and identify the component parts of an automatic processor 7. discuss common time and temperature (and errors) during film processing 8. state environmental concerns of manual/automatic film processing. 9. describe the effect of kilovoltage and miliamperage on x-ray beam quality 10. discuss the effects of radiation exposure on the human body (and pregnant women) 11. discuss the ALARA concept 12. discuss methods of protecting the patient from excess radiation 13. describe measures used to protect the operator from excess radiation <p>Students must achieve a minimum of 75% ("C") in lecture for successful completion of the course.</p> <p>PROGRAM: <i>(Numbering reflects Program Outcomes as they appear in the college catalog)</i></p> <p>The following program outcome(s) will be incorporated through self critique and peer evaluations:</p> <ol style="list-style-type: none"> 1. Integrate knowledge of oral anatomy with principles of radiation production, physics, biology, safety, interpretation and mounting. 2. Continuously self assess through critical thinking and problem solving. <p>GENERAL EDUCATION: <i>(Numbering reflects General Education Outcomes as they appear in the college catalog)</i></p>
<p>Evaluation: List how the above outcomes will be assessed.</p>	<p>Assessment will be based on the following criteria:</p> <ol style="list-style-type: none"> 1. Quizzes 2. Examinations

<p>Instructional Resources:</p> <p>List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.</p>	<p>Required: None</p> <p>Desired: None</p>
<p>Textbook(s)</p>	<p>Haring, J.I., and Jansen, Laura <u>Dental Radiography: Principles and Techniques</u>. Philadelphia: W.B. Saunders Company, Latest Edition.</p> <p>Kasle, Myron J., and Langlais, Robert P. <u>Exercises in Oral Radiographic Interpretation</u>. Philadelphia: W.B. Saunders Company, Latest Edition.</p> <p><u>Torres and Ehrlich Modern Dental Assisting</u>, Bird DL, Robinson DS, Latest Edition</p>