4/29/2025	DATE	AHD	DIVISION
☑	REQUIRED COURSE	☐	NEW COURSE
☐	ELECTIVE COURSE	☑	REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	DHY-045		TITLE: *(30 Characters Max)*		Radiology					
SEM CR HRS:	3.0	Lecture:	2.0		Lab:	0.0	ICCB Lab:	3.0	ECH:	5.0
Course Level:	☐ Gen Ed/IAI ☐ Baccalaureate/Non-IAI	☑ Career/Technical ☐ Dev Ed/Not in Degree Audit			Clinical Practicum:	3.0	Work-based Learning	0.0	WBL ECH:	0.0
Course PCS & CIP:	12 - 51.0601		IAI Code:		N/A		Contact Hours (Minutes/Week)			
Repeatable (Y/N):	N	Pass/Fail (Y/N):	N	Variable Credit (Y/N):	N	Min:	Max:	16 Wks	250	8 Wks 500
Prerequisites:	Admission to the Dental Hygiene Program									
Corequisites:	None									
Catalog Description: (40 Word Limit)	This course is designed to include the principles and biological effects of radiation in addition to the safety measures used in dental radiology. Basic dental imaging principles and techniques will be stressed for dental hygiene interpretation.									

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
The history of x-radiation	1		0	
Radiation physics, production of radiation and the x-ray machine	2		1	
Radiation characteristics	4		0	
Radiation biology and safety	4		1	
Normal anatomical landmarks	4		3	
Issues affecting the dental radiographs	2		1	
Bisection of the angle and interproximal exposure technique	2		2	
Mounting and visual quality	2		1	
Paralleling technique	2		10	
Special patients and localization techniques	2		1	
Radiographic interpretation	4		3	
Panorex and oral radiography/IO/EO photos	1		1	
Patient quota	0		21	
TOTAL	30	0	45	0

EVALUATION

QUIZZES	☑	EXAMS	☑	ORAL PRES	☑	PAPERS	☑
LAB WORK	☑	PROJECTS	☑	COMP FINAL	☑	OTHER	☐

COURSE MATERIALS

TITLE:	Dental Radiography Principles and Techniques	
AUTHOR:	Iannucci, J., Jansen, L.	
PUBLISHER:	Elsevier/Evolve	
VOLUME/EDITION/URL:	6th	
COPYRIGHT DATE:	2022	

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		The student will be able to:
The history of x-radiation	1	1. Cite the history, inventor and applications of x-radiation.
Radiation physics, production of radiation and the x-ray machine	3	1. Explain how x-rays are produced and the different parts of the x-ray machine and their role in x-ray production
Radiation characteristics	4	1. Explain the specific characteristics of radiation.
Radiation biology and safety	5	1. Analyze and evaluate the biological effects of radiation and practice proper radiation safety procedures.
Normal anatomical landmarks	7	1. Identify the normal anatomical landmarks found in panoramic and complete full mouth series of radiographs.

Issues affecting the dental radiographs	3	1. Identify and indicate with issues that affect radiographs.
Bisection of the angle and interproximal exposure technique	4	1. Properly expose a standard bisection of the angle full mouth series including bitewings.
Mounting and visual quality	3	1. Arrange and mouth intra-oral radiographs and be able to identify errors in exposing and processing dental radiographs.
Paralleling technique	12	1. Properly attach and prepare the XCP film holders and properly expose a standard paralleling full mouth series.
Special patients and localization techniques	3	1. Manipulate and be able to expose radiographs for specialty patients and situations.
Radiographic interpretation	7	1. Recall, recognize and identify and interpret radiographic findings in exposed receptors.
Panorex and extra oral radiography/IO/EO photos	2	1. Label and select the proper exposure and processing of panoramic imaging.
Patient quota	21	1. Completely expose, process and evaluate all radiographic techniques on live patients.
	75	

Outcomes*	Outcome Title	At the successful completion of this course, students will be able to:
Course Outcome 1	Radiation Physics/Safety	Interpret knowledge of radiation physics and safety.
Course Outcome 2	Equipment Operation	Operate radiographic equipment competently.
Course Outcome 3	Radiographic Techniques	Apply radiographic techniques accurately.
Course Outcome 4	Radiographic Images	Evaluate radiographic images for variants of normal and diagnostic quality.
Course Outcome 5	Legal/Ethical Standards	Demonstrate legal and ethical standards.
Primary Laker Learning Competency	Creative Thinking & Problem Solving: Students think creatively to solve problems.	
Secondary Laker Learning Competency	Professional Skills & Ethics: Students demonstrate professional skills and ethical accountability.	

**Course and program outcomes will be used in the software for outcomes assessment and should include at least 1 primary and 1 secondary Laker Learning Competency. Limit to*