Course Description Form

1. Course Name:

Dental Radiology

2. Course Code: ZUDE0307

3. Semester / Year: 2025-2026

Annual

4. Description Preparation Date:

15/8/2025

5. Available Attendance Forms:

Weekly

6. Number of Credit Hours (Total) / Number of Units (Total)

30 hours (Theoretical) + 60 hours (Practical). (one theoretical hours and two practical hours week) (four credit)

7. Course administrator's name (mention all, if more than one name)

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8. Course Objectives

Course Objectives	Include the theoretical and practical side of using deferent x-ray machine and how a dentist make a diagnosis of deferent type disease affecting teeth a periodontal tissue around the tooth, with complete knowledge of the biological effect of radiation on human body.

9. Teaching and Learning Strategies

Strategy	Practical training on patient for taking a periapical radiograph divided into the incisors, canine, premolar and molar of upper and lower jaw, also for taking panoramic radiograph and cephalometric in addition to cone beam C.T.

10. Course structure

Week	Hours	Subject name	Required learning outputs	Learning method	Assessment method
1.	**1**	Physics of radioation	**(introduction and definitions of nature of radiation, type of radiation)**	Power Point	Quiz
2.	**1**	2-Production of radiation	**x-ray machine, interaction of x-ray with matter) composition of matter**	Power Point	Quiz
3.	**1**	Film imaging	**(types of x-ray films, processing cycle,dark room, intensifying screen**	Power Point	Quiz

4.	**1**	Factors controlling x-ray beam , dosimetry and invers square low	**Factors controlling x-ray beam , dosimetry and invers square low**	Power Point	Quiz
5.	**1**	Projection jeometry	**(sharpness, distortion, image characterstic and artifacts)**	Power Point	Quiz
6.	**1**	Biological effects of radiatin	**(direct & indirect effects, determistic and stochastic effect)**	Power Point	Quiz
7.	**1**	Safety and Protection	**(source of exposure , dose limits , exposure and risk and reducing dental exposure)**	Power Point	Quiz
8.	**1**	Intraoral projection	**(periapical, bitwing, and occlusal radiography)**	Power Point	Quiz
9.	**1**	Digital radiography	**(strength , limitations , comparing with conventional radiography and indications**	Power Point	Quiz
10.	**1**	Patient's management	**(mangement of pt.child, contrast media & localization technique**	Power Point	Quiz
11.	**1**	Cephalometric imaging	**g (technique, indications, evaluation of the image**	Power Point	Quiz
12.	**1**	Panoramic radiography	**(principels, technique ,positin and interpretation)**	Power Point	Quiz
13.	**1**	Craniofacial imaging	**(types , indication and interpretation)**	Power Point	Quiz
14.	**1**	CBCT	**(principles, components, strength and limitations).**	Power Point	Quiz
15.	**1**	CBCT	**(principles, components, strength and limitations).**	Power Point	Quiz
16.	**1**	Radiographic anatomy part1	**teeth, supporting dental structures, maxilla and mid facial bones)**	Power Point	Quiz
17.	**1**	Radiographic anatomy part 2	**mandible, Tmj, base of skull, air way, restorative materials)**	Power Point	Quiz
18.	**1**	Advanced imaging modalities	**CT, MRI AND ULTRASOUND**	Power Point	Quiz
19.	**1**	Radiography &Implantology	**modalities, indications**	Power Point	Quiz
20.	**1**	Infection control	**infection control in radiography clinic, protection of pt., protection of workers**	Power Point	Quiz

21.	**1**	Prescribing diagnostic imaging	**radiologic examination and guide lines for ordering imaging)**	Power Point	Quiz
22.	**1**	Radiographically interpretations of common diseases	**interpretation of dental caries, and periodontal disease**	Power Point	Quiz
23.	**1**	Cysts of the jaw	**odontogenic and non-odontogenic cysts**	Power Point	Quiz
24.	**1**	Dental anomalies	**acquired and developmental**	Power Point	Quiz
25.	**1**	Inflammatory conditions of the jaws	**periapical infectious disease, osteomyelitis, pericoronitis)**	Power Point	Quiz
26.	**1**	Trauma	**Dento-alveolar trauma , dental fractures and bone fractures**	Power Point	Quiz
27.	**1**	TMJ abnormalities	**anatomy of TMJ, application)**	Power Point	Quiz
28.	**1**	Salivary gland disease	**imaging modalities, interpretation**	Power Point	Quiz
29.	**1**	Craniofacial anomalies	**Cleft lip and palate**	Power Point	Quiz
30.	**1**	Computed tomography	**indications ,strength, limitations**	Power Point	Quiz

	Course Evaluaton				
	Learning and Teaching Resources	White and Pharoah's Oral radiology principles and interpretation. Sanjay Mallya and Ernest Lam. 8th edition. 2019, Elsevier. 2. Ghom, Anil Govindrao . Textbook of oral radiology- E-Book. 2016, Elsevier Health Scienc			