Radiology

A medical physical subject that studies the types of radiology techniques used in dentistry, magnetic resonance and others.
Theoretical: The school year begins with a detailed explanation of the physics of the radiology device and its method of work and requires follow-up and understanding, then it is concerned with teaching you the technique of radiography, its angles and types, and reading and diagnosing radiological images.

Practical: Apply what you have learned theoretically

Different Learning Methods in the Department of Dentistry

A- Auditory method: This method depends on communicating information in the form of sounds that are heard by the learner for analysis and storage.
B- Visual method: in which information is communicated by displaying color images, videos or any form of visual educational aids.
C- Reading method: It is one of the methods that depend on reading information to understand and store it.
D. Interdisciplinary professional education where dental students collaborate with other healthcare professionals, to promote a holistic approach to patient care.

Different evaluation methods for students in the Department of Dentistry

Daily tests with multiple-choice questions for subjects that require practical skills.
B- Daily exams with practical questions.
C- Semester and final exams.
D- Setting grades for the assigned homework .
H- Grades of participation of questions competing for the subjects of study.
G- Daily evaluation of the student's work in scientific laboratories and educational clinics.

Learning Outcomes for Dental Courses

Using health information technology in oral and dental health care effectively.
Apply appropriate professional, ethical and legal standards in the provision of patient care in accordance with health care rules and regulations.
Providing graduates with scientific knowledge and professional skills in the fields of oral and dental surgery, dental prosthesis, dental preservation, orthodontics, pediatric dentistry, periodontal pathology and surrounding tissues, as well as radiology
Knowledge of the principles of oral and dental health and understanding of the development, prevention and treatment of related diseases
Health promotion and disease prevention to serve the community.

Integrating basic and medical sciences into healthcare practice.
Develop decision-making and problem-solving skills in healthcare.
Evaluate the state of oral and dental health and the medical condition of the patient, request the necessary diagnostic analyzes, and interpret the results of various analyzes to reach the appropriate diagnosis.
Prepare a care plan for the prevention and treatment of diseases taking into account the needs of the patient.
Demonstrate competence in performing procedures safely in all aspects of dentistry and prevent injuries arising from treatment.
Providing graduates with theoretical knowledge and laboratory and clinical skills that increase the effectiveness of diagnosis.
Preparing dental graduates and training them to become distinguished in various fields of dentistry.

Lesson name and units

Subject	***1st Semester hours/week***		***2nd Semester hours/week***		***Units***	***Code***
	Theory	*Practical*	*Theory*	*Practical*		
2. Dental Radiology **علم اشعه اسنان**	1	٢	1	٢	4	DR319

1-Subject title	**Dental Radiology**	
2-Number of credits	Theory:2	Clinical:2
3-Number of contact hours	Theory:1h/wk.	Clinics:2h/wk
4-Subject time	Third Year	

No.	**Title of the lectures**	**Hours**
1	Physics of radioation(introduction and definitions of nature of radiation, type of radiation)	**1**
2	Production of radiation(x-ray machine, interaction of x-ray with matter) composition of matter	**1**

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

20	Infection control(infection control in radiography clinic, protection of pt., protection of workers)	**1**
21	Prescibing diagnostic imaging(radiologic examination and guide lines for ordering imaging)	**1**
22	Radiographical interpretations of common diseases(interpretation of	**1**

	dental caries, and periodontal disease	
23	Cysts of the jaw(odontogenic and non odontogenic cysts)	**1**
24	Dental anomalies(acquired and developmental)	**1**
25	Inflammatory conditions of the jaws(periapical inf disease, osteomylitis, pericoronitis)	**1**
26	Trauma(dento alveolar trauma , dental fructures and bone fructues	**1**
27	TMJ abnormalities(anatomy of TMJ, application)	**1**
28	Salivary gland disease (imaging modalities, interpretation)	**1**
29	Craniofacial anomalies (Cleft lip and palat)	**1**
30	Computed tomography(indications ,strength, limitations)	**1**
Total		**30**

Clinical requirements

Number	Title of clinical requirements	Hours
1	Fundamentals of radiology:component of x- ray machine and production of X-ray	2
2	X-ray film (types and indication)	2
3	Intraoral techniques(periapical, bite-wing and occlusal films)	2
4	Ideal radiograph	2
5	Land marks(maxilla, mandible)	2
6	Dental panoramic radiography(indication and anatomy)	2
7	CBCT (indication and anatomy)	2
8	Cephalometric (indication and anatomy)	2
9	Common disease (caries , PDL)	2
10	Cyst(odontogenic and nonodontogenic)	2
11	Clinical work	2
12	Clinical work	2
13	Clinical work	2
14	Clinical work	2
15	Clinical work	2
16	Clinical work	2
17	Clinical work	2
18	Clinical work	2
19	Clinical work	2
20	Clinical work	2
21	Clinical work	2
22	Clinical work	2
23	Clinical work	2
24	Clinical work	2
25	Clinical work	2
26	Clinical work	2
27	Clinical work	2
28	Clinical work	2
29	Clinical work	2

30	Clinical work	2
Total		60