

## Course Description Form

1. Course Name:	
Oral and Maxillofacial Radiology	
2. Course Code:	
3. Semester / Year:	
Year 2024-2025	
4. Description Preparation Date:	
22/11/2024	
5. Available Attendance Forms:	
Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
90hours / 4 units	
7. Course administrator's name (mention all, if more than one name)	
Name: lecturer Noor Hashem Mohammad Email: <a href="mailto:noor.hashem.g@ibnsina.edu.iq">noor.hashem.g@ibnsina.edu.iq</a>	
8. Course Objectives	
Course Objectives	- The aim is to qualify trained dentists to use various X-ray machines and systems and how to deal with radiation hazards as well as how to describe, read and diagnose various types of X-ray films and teach students how to deal with patients and prepare them for clinical work in the next stage.
9. Teaching and Learning Strategies	
Strategy	<ul style="list-style-type: none"><li>• Theoretical lectures.</li><li>• Scientific discussions and seminars.</li><li>• Use of LCD screens.</li><li>• Use of visual aids such as X-ray films and videos.</li><li>• Working in clinics, dealing with patients, and taking X-ray films for various medical conditions.</li></ul>

## 10. Course Structure

Week	Hours	Required learning outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Physics of radiation (Introduction and definitions of nature of radiation, type of radiation)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
2	1	Production of radiation (x-ray machine, interaction of x-ray with matter) composition of matter	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
3	1	Film imaging (types of x-ray films, processing cycle, dark room, intensifying screen)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
4	1	Factors controlling x-ray beam, dosimetry and inverse square law	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar

5	1	Projection geometry (sharpness, distortion, image characteristic and artifacts)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
6	1	Biological effects of radiation (direct & indirect effects, deterministic and stochastic effect)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
7	1	Safety and Protection (source of exposure, dose limits, exposure and risk and reducing dental exposure)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
8	1	Intraoral projection (periapical, bitewing, and occlusal radiography)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
9	1	Digital radiography (strength, limitations, comparing with conventional radiography)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar

		and indications			
10	1	Patient's management (management of pt. Child, contrast media & localization technique	Oral &maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams& seminar
11	1	Cephalometric imaging (technique, indications, evaluation of the image	Oral &maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams& seminar

12	1	Panoramic radiography (principles, technique, position and interpretation)	Oral &maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams& seminar
13	1	Craniofacial imaging (types, indication and interpretation	Oral &maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams& seminar
14	1	CBCT (principles, components, strength and limitations).	Oral &maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and

					Final exams& seminar
15	1	CBCT (clinical applications in maxillofacial region, anatomy and interpretations).	Oral &maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams& seminar
16	1	Radiographic anatomy part1(teeth, supporting dental structures, maxilla and midfacial bones)	Oral &maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams& seminar
17	1	Radiographic anatomy part 2(mandible, TMJ, base of skull, air way, restorative materials)	Oral &maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams& seminar
18	1	Advanced imaging modalities (CT, MRI and ULTRASOUND)	Oral &maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams& seminar
19	1	Radiography &Implantology (modalities, indications)	Oral maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams& seminar

20	1	Infection control (infection control in radiography clinic, protection of pt., protection of workers)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
21	1	Prescribing diagnostic imaging (radiologic examination and guide lines for ordering imaging)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
22	1	Radiographical interpretations of common diseases (interpretation of dental caries, and periodontal disease)	oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
23	1	Cysts of the jaw (odontogenic and non-odontogenic cysts)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
24	1	Dental anomalies (acquired and developmental)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams &

					seminar
25	1	Inflammatory conditions of the jaws (periapical inf disease, osteomyelitis, pericoronitis)	Oral & maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
26	1	Trauma (dento alveolar trauma, dental fractures and bone fractures)	oral maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
27	1	TMJ abnormalities (anatomy of TMJ, application)	oral maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
28	1	Salivary gland disease (imaging modalities, interpretation)	oral maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
29	1	Craniofacial anomalies (Cleft lip and palate)	oral maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams &

					seminar
30	1	Computed tomography (indications, strength, limitations)	oral maxillofacial radiology	PowerPoint Lecture	Quiz, semester, Mid-term and Final exams & seminar
Total	30				

### Clinical requirements

Number	Title of clinical requirements	Hours
1	Fundamentals of radiology: component of the 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 diseases (caries, PDL)	2



<b>10</b>	Cyst (odontogenic and nonodontogenic)	<b>2</b>
<b>11</b>	Clinical work	<b>2</b>
<b>12</b>	Clinical work	<b>2</b>
<b>13</b>	Clinical work	<b>2</b>
<b>14</b>	Clinical work	<b>2</b>
<b>15</b>	Clinical work	<b>2</b>

<b>16</b>	Clinical work	<b>2</b>
<b>17</b>	Clinical work	<b>2</b>
<b>18</b>	Clinical work	<b>2</b>
<b>19</b>	Clinical work	<b>2</b>
<b>20</b>	Clinical work	<b>2</b>
<b>21</b>	Clinical work	<b>2</b>
<b>22</b>	Clinical work	<b>2</b>
<b>23</b>	Clinical work	<b>2</b>
<b>24</b>	Clinical work	<b>2</b>

<b>25</b>	Clinical work	<b>2</b>
<b>26</b>	Clinical work	<b>2</b>
<b>27</b>	Clinical work	<b>2</b>
<b>28</b>	Clinical work	<b>2</b>
<b>29</b>	Clinical work	<b>2</b>
<b>30</b>	Clinical work	<b>2</b>
<b>Total</b>		<b>60</b>

## 11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ..... etc

Annual quest: 20% are distributed as follows;

5% Clinical Requirements

5% Quizzes

5% Seminars

5% Written exam

20% written Midterm exam

60% of Final exams are distributed as follows:

10% clinical exam

15% Practical slides exam

35% Written

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)

**White and Pharoah's Oral radiology principles and interpretation. Sanjay Mallya and Ernest Lam. 8th edition. 2019, Elsevier.**

**Ghom, Anil Govindrao. Textbook**

Main references (sources)

**of oral radiology-E-Book. 2016, Elsevier Health Sciences.**

Recommended books and references (scientific journals, reports...)	1- <b>Fundamentals of oral radiology.</b> 2- <b>Essentials of Dental Radiography and Radiology.</b>
Electronic References, Websites	<b>College Official Website</b>







