

## 29320 - Dental Radiology

### Información del Plan Docente

<b>Academic Year</b>	2016/17
<b>Academic center</b>	229 - Facultad de Ciencias de la Salud y del Deporte
<b>Degree</b>	442 - Degree in Odontology
<b>ECTS</b>	6.0
<b>Course</b>	2
<b>Period</b>	Second semester
<b>Subject Type</b>	Compulsory
<b>Module</b>	---

### **1.Basic info**

#### **1.1.Recommendations to take this course**

#### **1.2.Activities and key dates for the course**

### **2.Initiation**

#### **2.1.Learning outcomes that define the subject**

#### **2.2.Introduction**

### **3.Context and competences**

#### **3.1.Goals**

#### **3.2.Context and meaning of the subject in the degree**

#### **3.3.Competences**

#### **3.4.Importance of learning outcomes**

### **4.Evaluation**

### **5.Activities and resources**

#### **5.1.General methodological presentation**

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The learning process that is designed for this course is based on the following:

Interactive teaching, eminently practical, encouraging student participation during the lecture.

Workshops oriented to problem solving, case studies, carried out in groups.

The theoretical knowledge will enable the student assessment of the indications, advantages, disadvantages and contraindications of the different imaging formation techniques , as well as the legal framework for its use.

The workshops will allow to apply theoretical knowledge for the resolution and interpretation of different practical cases as well as performing the radiographic examinations required in dental practice.

## 5.2.Learning activities

The program that the student is offered to achieve the expected results includes the following activities:

1

Interactive lectures according to course syllabus.

Bases and mechanisms to obtaining radiological image. Radiation Protection.

Radiological anatomy with integration of the oral cavity and dental structures in the area of head and neck.

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Semiotics and odontostomatological radiopathology in different imaging formation techniques .

Dentascan . Diagnostic imaging in temporomandibular joint with special reference to the magnetic resonance .

2

Face work shops with radiological cases ( X-ray viewer ).

3

Visit hospitals to display performance of CT, MRI and orthopantomography .

4

Non-contact activities.

### 5.3.Program

#### Introduction

1 Concept of Diagnostic Imaging. Modalities to obtain diagnostic imaging, historical sketch , development and evolution to the present day.

Bases and mechanisms for obtaining image

2 Concepts and general principles: electromagnetic and ionizing radiation.

3 Conventional Radiology and tomodensitometry . Physical principles , specific features.

4 Ultrasound and MRI. Physical principles , particularities .

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5 Radiological technique , basic principles: Orthopantomography and intraoral radiography.

### Radiation protection

7 Integration of the oral cavity and dental structures in the area of head and neck I

8 Integration the oral cavity and dental structures in the area of head and neck II

9 Integration of the oral cavity and dental structures in the area of head and neck III

### Radiological semiology and Radiopathology

10 Intraoral radiography and orthopantomography . Basic semiology.

11 Intraoral radiography and orthopantomography . Major syndromes .

12 Dentascan . Basic principles .

13 Dentascan . Semiology and radiopathology .

### Temporomandibular joint

14 Anatomical particularities . Diagnostic Imaging : conventional Radiology and tomodensitometry .

15 MRI . Radiological anatomy and semiological criteria.

16 MRI. Major syndromes .



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<https://fccsyd.unizar.es/academico/horarios-y-calendarios>

### 5.5. Bibliography and recommended resources

- Basic bibliography:
  - Radiología esencial / [directores] J. L. del Cura, S. Pedraza, A. Gayete Buenos Aires ; Madrid : Editorial Médica Panamericana, D.L. 2009
  - Radiología Oral Principios e interpretación. S.C White; M.J Pharoah. Elsevier Science. N° Edición: 4/2002
- Complementary bibliography
- Radiología ortopédica y radiología dental : una guía práctica / coordinadores, Francisco M. Tardáliga Montero, José Luis del Cura Rodríguez Buenos Aires ; Madrid : Editorial Médica Panamericana : Sociedad Española de Radiología Médica, cop. 2005
- Ros Mendoza L.H., Cañete Celestino E., Velilla Marco O.. Resonancia magnética de la articulación temporomandibular Radiología : Boletín de la Sociedad Española de Radiología y Electrología Médica y de Medicina Nuclear , 2008; 50: 377-385