

**COURSE DATA****Data Subject**

<b>Code</b>	34711
<b>Name</b>	Surgical pathology
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	6.0
<b>Academic year</b>	2023 - 2024

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1206 - Degree in Dentistry	Faculty of Medicine and Odontology	2	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1206 - Degree in Dentistry	14 - Surgical pathology	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
GARCIA BOTELLO, STEPHANIE ANNE	40 - Surgery

**SUMMARY**

Surgical pathology is a discipline in the undergraduate training of Medicine and Dentistry, which mainly includes the study of pathological processes that require surgical therapy, and the complications that may arise as a result of this therapy as well.

The course is taught in the second semester of the second degree course of Dentistry, and includes an essential and extensive study of the fundamentals of surgical pathology, which can be generalized to any area of specialty, and therefore gather the basics of Surgery in the core curriculum. It is therefore a discipline indispensable in the formation of the dentist because his activity continually address specific problems to the surgical field, and knowledge of the scientific and technical aspects of handling them is crucial for professional dealing with an adequate scientific basis.

It is required for a good education a sufficient knowledge of the morphological and physiological sciences, enabling the necessary understanding of the pathogenic and pathophysiological mechanisms, as well as the establishment of the diagnostic process and therapeutic indications.



It also includes finally a limited knowledge in some specific aspects of two specialities, which occasionally may be of interest in the field of dentistry, which are the otorhinolaryngology and ophthalmology. Without the aim of developing a full training in any of them, it is intended to give basic information about both specialties and some specific topics of interest to the dentist.

## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

It must have passed the basic subjects of Health Sciences

## OUTCOMES

### 1206 - Degree in Dentistry

- Conocer de los procesos generales de la enfermedad, entre los que se incluyen la infección, la inflamación, las alteraciones del sistema inmune, la degeneración, la neoplasia, las alteraciones metabólicas y los desórdenes genéticos.
- Estar familiarizado con las características patológicas generales de las enfermedades y trastornos que afectan a los sistemas orgánicos, específicamente aquellas que tienen repercusión bucal.
- Conocer, valorar críticamente y saber utilizar las fuentes de información clínica y biomédica para obtener, organizar, interpretar y comunicar la información científica y sanitaria.
- Conocer del método científico y tener capacidad crítica para valorar los conocimientos establecidos y la información novedosa. Ser capaz de formular hipótesis, recolectar y valorar de forma crítica la información para la resolución de problemas, siguiendo el método científico.
- Conocer las ciencias biomédicas en las que se fundamenta la Odontología para asegurar una correcta asistencia buco-dentaria. Entre estas ciencias deben incluirse contenidos apropiados de:  
Embriología, anatomía, histología y fisiología del cuerpo humano.  
Genética, Bioquímica, Biología celular y molecular  
Microbiología e inmunología
- Conocer la morfología y función del aparato estomatognático, incluyéndose contenidos apropiados de embriología, anatomía, histología y fisiología específicos.

## LEARNING OUTCOMES



- To promote autonomous learning of new knowledge and techniques as well as the motivation for quality.
- To learn to share information with other health professionals and teamwork.
- To understand basic biomedical sciences of dentistry to ensure proper oral-dental care.
- To learn about the general processes of disease, which include infection, inflammation, immune system disorders, degeneration, neoplasia, metabolic and genetic disorders.
- To be familiar with general pathological features of diseases and disorders that affect organ systems, specifically those that impact on the mouth area.
- To understand the mechanisms of action, indications and efficacy of drugs and other therapeutic interventions, knowing their contraindications, interactions, and systemic effects on other organs, based on the available scientific evidence.
- To obtain and develop medical records that contain all relevant information.
- To reach ability to formulate an initial diagnosis and establish a rational diagnostic strategy, being competent in recognizing situations that require urgent dental care.
- To be able to establish a diagnosis, prognosis and treatment planning adequate in all clinical areas of dentistry, being competent in the diagnosis, prognosis and treatment plan development of the dental patient who requires special care, including medically compromised patients (such as diabetics, hypertensive patients, immunocompromised, anticoagulated, etc.) and patients with disabilities.
- To recognize life-threatening situations and be able to perform basic life support maneuvers.
- To know and apply basic treatment to the common dental diseases in patients of all ages. Therapeutic procedures should be based on the concept of minimal invasion and in a holistic and integrated dental treatment.

## DESCRIPTION OF CONTENTS

### 0. A. LECTURES

#### 1. Fundamentals of surgery

- 1.-Initial approach and care of the trauma patiente
- 2.-The process of wound healing.
- 3.-Assessment and treatment of wounds and contusions..
- 4.-Pathological wound healing. Grafts and skin flaps.
- 5.- Endocrine and metabolic response to traumatic injury.
- 6.- Malnutrition and nutrition in surgery.
- 7.- Traumatic Shock: Definition, aetiology and pathophysiology.
- 8.- Traumatic Shock: Diagnosis and treatment.
- 9.- Surgical infection: classification and antibiotic prophylaxis.



- 10.- Local infection: Abscess and phlegmon. Regional infection: lymphadenitis and adenitis.
- 11.-Severe soft tissue infections. Tetanus.
- 12.-Sepsis and septic shock.
- 13.-Asepsis and antisepsis.
- 14.- Fundamentals of oncologic surgery.
- 15.- Fundamentals of transplant surgery.

## **2. Ear nose and throat disease with particular repercussion in the oral area.**

- 16.- Pathology of the maxillary sinus.
- 17. -Snoring and sleep apnoea.
- 18.-Vertigo in dentistry.

## **3. Fundamentals of traumatology and orthopedics**

- 19. Bases of joint and bone pathology.
- 20. Bone and joint infection.
- 21. Bone tumors.
- 22. General study of fractures.
- 23. Bone consolidation and pseudoarthrosis.

## **4. Fundamentals of maxillofacial surgery**

- 24. Temporomandibular joint pathology.
- 25. Dental infections.
- 26. Tumors in maxillofacial surgery.
- 27. Maxillofacial Trauma I - Fractures (Classification and mechanisms, diagnosis, and presentation).
- 28. Maxillofacial Trauma II- Fractures (Closed and open treatment).

## **5. Ophthalmic pathology with special repercussion in the oral area.**

- 29.-The red and painful eye.
- 30.- Loss of vision.

## **6. B. SEMINARS**

- 1. Concept and development of surgery.
- 2. Interactive study-review through clinical cases of the endocrine-metabolic response to trauma, shock and surgical wounds.
- 3. Interactive study-review through clinical cases of local, regional and general infection, asepsis and antiseptic techniques, oncology and transplant surgery.
- 4. Interactive study-review through clinical cases of Otorhinolaryngology.
- 5. Interactive study-review through clinical cases of Maxillofacial surgery. Surgical techniques.
- 6. Basic ophthalmic examination

**7. Basic surgical procedures in Ophthalmology****7. C. DRY LAB PRACTICALS**

1. Basic surgical techniques I: instruments, materials and surgical knots.
2. Basic surgical techniques II: sutures.
3. Fundamentals of surgical history taking and diagnosis.
4. Basic surgical examination with particular attention to the oral-dental area.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	33,00	100
Classroom practices	15,00	100
Laboratory practices	12,00	100
Development of group work	5,00	0
Study and independent work	45,00	0
Readings supplementary material	10,00	0
Preparation of evaluation activities	15,00	0
Preparing lectures	10,00	0
Preparation of practical classes and problem	5,00	0
<b>TOTAL</b>	<b>150,00</b>	

**TEACHING METHODOLOGY**

50% of the classroom hours will be devoted to theoretical teaching through the provision of lectures. It will provide students with the scheme, basic summary of the class, and the teacher also will try to stimulate the active participation of the students with frequent introduction of concrete examples of the issues.

45% of classroom time will be devoted to practical training. The activities will be distributed in large group seminars and also in small group laboratory practice.

Large group seminars will be devoted primarily to addressing specific problems and surgical cases, as well as the discussion of practical and technical aspects of surgery and the two specialties included, while the laboratory practices, developed in the form of workshops, will address the basic technical maneuvers of surgery. The staff will encourage student activity and contact with surgical tools and materials.

It will require personal work or group work of students in some specific aspects of the program, and for the implementation of these activities the use of *e-learning* systems and other ICT will be encouraged





## EVALUATION

The assessment will be carried out according to the following criteria

### 1. Evaluation of practical activities.

The evaluation of practical activities comprises 30% of the overall grade and is distributed in the following modules:

- Dry-lab and seminar attendance. Weight 60% (18% of the final grade).
- Individual coursework and group projects. Oral presentation in seminars or case presentation in the virtual classroom: Weight 35% (10,5% of the final grade).
- Attitude and participation in practical activities, adequate use of e-learning systems and other ICTs: Weight 5% (1,5% of the final grade).
- The criteria to be able to attend the first exam sitting are that the student must have passed the practical activities and attended a minimum of 9 out of 11 sessions (80%) (includes dry-lab and seminar sessions)
- Those students who have not fulfilled the minimum criteria to attend the first sitting, may attend the second sitting after having passed an oral assessment of the practical activities.

### 2. Final exam.

- Final objective test to evaluate the knowledge acquired and solve specific questions, which will represent 70% of the global evaluation and is divided into the following blocks:
  - 60 multiple-choice questions, in which every three failures will mean the loss of a correct answer: Weighting of 60% (42% of the overall evaluation).
  - Two short answer questions to choose between three options: Weighting of 40% (28% of the overall evaluation).
- It is an essential requirement to pass the final objective test to be able to add the grade of the practical activities.

**Students are reminded of the great importance of carrying out evaluation surveys of all the teaching teachers of this subject**

## REFERENCES



### Basic

#### - CIRUGÍA GENERAL

Parrilla P., García-Granero E., Martín-Pérez E., Morales S., Navarro S., Targarona E., AEC (Asociación Española De Cirujanos). Cirugía AEC. Manual de la Asociación Española de Cirujanos 3ª Edición Marzo 2022 Editorial Médica Panamericana S.A. ISBN 9788491101048.

### Additional

#### - A. Fundamentos Científicos de la Cirugía

- Charles Brunickardi F. Schwartzs Principles of Surgery. Mc Graw Hill Education. Edición 11 2019. ISBN-10/13: 1259835359 ISBN-13: 978-1259835353.

- Williams NS, OConnell PR, McCaskie AW. Bailey & Loves Short Practice of Surgery. CRC Press. Edición 27: 2018. ISBN-10/13: 1138031666/978-1138031661.

#### B. Patología Otorrinolaringológica Con Repercusión Especial En La Región Bucodental.

- Roland N., McRaeD., McCombe AW. Key Topics in Otolaryngology. Thieme; Edición 3 2019. ASIN: B07MVMBJ62.

#### C. Patología Traumatológica Y Maxilofacial.

- Protocolos clínicos de la SECOM-CyC: <https://www.secomcyc.org/area-profesional/protocolos-clinicos-de-la-secom/>

- Oral and Maxillofacial Surgery. Oxford Specialist Handbooks in Surgery. Third edition. Edited by Carrie Newlands. Oxford University Press. 2020

- Oral and Maxillofacial Surgery for the Clinician. Krishnamurthy Bonanthaya. Ed. Springer. 2021

#### D. Patología Oftalmológica Con Repercusión Especial En La Región Bucodental.

- KANSKI Oftalmologia clínica. Editorial Elsevier

- KANSKI JK, NISCHAL KK. Atlas de Oftalmologia clínica. ED Harcourt Brace