ENGLISH FRIENDLY COURSES (EFC) 2019-2020 – CAMPUS OF BIZKAIA

https://www.ehu.eus/es/web/medikuntza-erizaintza-fakultatea
Coordinator: medicina.internacional@ehu.eus

In addition to the general offer of courses taught in English, some Centers also offer for incoming students English Friendly Courses (EFC): subjects taught in Spanish, in which the syllabus summary; lecturer tutoring, examinations and/or papers are available in English.

FACULTY OF MEDICINE AND NURSING (327)		SEMESTER	CREDITS	SCHEDULE[1]
27287	Fundamentos de Cirugía	Annual	9	M
27568	Practicum I	Annual	12	M/A
27301	Prácticas Tuteladas - Rotatorio (Cruces)	Annual	54	M
25212	Salud Pública	Sep. 2019- Jan. 2020	6	M
26711	Biología Celular	Sep. 2019- Jan. 2020	6	M
27222	Farmacología General y Clínica	Sep. 2019- Jan. 2020	6	M
27219	Microbiología e Inmunología	Sep. 2019- Jan. 2020	8	M
27283	Documentación, Historia, Teoría y Método de la Medicina	Sep. 2019- Jan. 2020	6	M
27272	Histología Médica Básica	Sep. 2019- Jan. 2020	6	M
27276	Microbiología clínica e infección	Sep. 2019- Jan. 2020	9	M
27277	Fundamentos de Farmacología Médica	Sep. 2019- Jan. 2020	6	M
27246	Implantología	Jan. 2020- May 2020	6	M/A
27564	Interpretación de análisis clínicos	Jan. 2020- May 2020	4,5	M
27894	Farmacología en Fisioterapia	Jan. 2020- May 2020	6	A
27265	Genética y Biología del Desarrollo	Jan. 2020- May 2020	6	M
27273	Histología Médica Especial	Jan. 2020- May 2020	6	M
27263	Farmacología Médica Aplicada	Jan. 2020- May 2020	6	M

[1] SCHEDULE: Morning (M)/ Afternoon (A): begins at 13.30.
By clicking the subject´s name, its Syllabus will appear.

27287 Fundamentals of Surgery

DESCRIPTION & CONTEXTUALISATION OF THE SUBJECT

The subject is oriented to establish the scientific bases of Surgical Pathology, as well as the knowledge of the basic and general concepts that will be later on applied in the study of surgical diseases.

Likewise, the acquisition of practical skills through teaching in simulators is especially important as preparation for post-practice practices in a clinical setting (with patients).

SKILLS / LEARNING OUTCOMES FOR THE SUBJECT

Before passing the subject the student has to reach the skills detailed in the “Practical Content”, and probe enough knowledge and comprehension of the “theoretical Content”.

THEORETICAL / PRACTICAL CONTENT

Theoretical content

1. Traumatic injuries: closed and open injuries

2. Biology of wound healing

3. Wound treatment. Wound healing pathologies.

4. Special injuries: firearm injuries, bite injuries, poisoned wounds

5. Burn injuries, chemical injuries, frostbite

6. Crash syndrome, blast syndrome, fat embolism, gas embolism.

7. Reactions to stress, trauma and surgery.

8. Hemorrhage in surgery

9. Shock

10. Surgical infections: local, regional and systemic.

11. Necrotizing infections

12. Sepsis, septic shock, SIRS.

13. Anesthesia

14. Postoperative care

15. Surgical oncology

16. Transplants.

Practical content

1. Suture materials

2. Suture techniques

3. Dressings and bandages

4. Drainages

5. Common surgical instruments

6. Cardiopulmonary resuscitation

7. Basics on echography

8. Basic laparoscopic skills

9. Basic skills in a surgical theater

10. Venipuncture, ultrasound vascular access, central vessels cannulation

11. Rectal touch, urethral catheters, lumbar puncture

METHODS

The teaching of "Fundamentals of Surgery" is taught through three types of teaching activities, each of which is subject to specific evaluation: Lectures & Seminars (theoretical content) and Practical Laboratory Work (Practical content).

ASSESSMENT SYSTEM

Practical test & written exam (four long themes, and ten short questions)

TOOLS USED & GRADING PERCENTAGES

To pass the subject 80% of lecture attendance is mandatory.

The practical test is scored on ten; five is required to pass the subject.

The written exam is scored on ten; five is required to pass the subject.

The final qualification is obtained from the written exam score, which can be upgraded according to the mark from the practical test.

ORDINARY EXAM CALL: GUIDELINES & DECLINING TO SIT

There is one ordinary call for practical and written exams. Prior notice is not required to decline to sit.

Once the practical test is passed, it is not necessary to take it anymore.

COMPULSORY MATERIALS

Basic bibliography

Sabiston Textbook of Surgery. 20th ed. Elsevier 2016. Hardcover ISBN: 9780323299879. Paperback ISBN: 9780323401623. eBook ISBN: 9780323401647

Schwartz's Principles of Surgery, 11e. New York, NY: McGraw-Hill; ISBN 978-1-259-83535-3

In-depth bibliography

It is not advised

Journals

It is not advised

Useful websites

http://www.oc.lm.ehu.es/Departamento/OfertaDocente/Fundamentos/Contenidos/Textos/Indice_Textos.htm

http://www.oc.lm.ehu.es/Departamento/OfertaDocente/Fundamentos/Contenidos/iconografia/fundamentos__de__cirugía.htm

http://www.oc.lm.ehu.es/Departamento/OfertaDocente/Fundamentos/Contenidos/VideosCirugia.htm

COURSE: PRACTICUM I		CREDITS: 12
SCHOOL YEAR: 2º	SEMESTER: 1º Y 2º	Academic Year: 2018-2019
LECTURER: ITZIAR HOYOS CILLERO		

Program description.-

Nursing practicums, external experiential education, provide the essential link to the theoretical learning from the classroom to real life. Practicum I is an educational course with university supervision that enable students to apply the knowledge in the clinical setting to further competence development, clinical reasoning and problem solving, as well as communication and leadership skills. These are foundational to both the art and science of nursing, and prepare students as future health professionals to achieve success for developing their profession.

Prerequisites for this course.-

Students must have passed first academic year clinical course "Introduction to Care Practice".

Competences.-

Pre-professional practices, as an independent clinical rotating period with a final evaluation of competences in primary health centers, hospitals and other healthcare centers that will enable students to acquire nursing professional values, healthcare communication competences, as well as, clinical reasoning, clinical management and critical thinking competences. This clinical period, will help students to integrate and apply the knowledge, skills and attitudes in the clinical setting as a professional practice, based on nursing values and principles associated to established competences for general objectives and subjects according to the official nursing degree.

Methodology.-

In this external experiential education period, different agents are involved. First, students who are responsible for their own learning process, taking part in the process itself, and participating in the development and achievement of the competences as well as in the evaluation process.

Moreover, during nursing students' external experiential education period, according to established regulations for students' external practices by the UPV/EHU, other involved agents during this period are:

Instructor (Clinical setting instructor)
A professional nurse from a clinical setting, who is in charge of students' educational training during their clinical pratice in collaboration with the university.

University Tutor (***Teaching and Research Staff)***
A lecturer from the university, who is responsible for students' monitoring and support during their external experiential education period.

The learning methodology in this course is based on the scientific method for problem solving and the reflective practice, as a way to enable students to learn and acquire the knowledge and strategies to become reflective healthcare professionals.

Practicum I is an educational course with university supervision that enable students to apply the knowledge in the clinical setting to further competence development, clinical reasoning and problem solving, as well as communication and leadership skills. These are foundational to both the art and science of nursing, and prepare students as future health professionals to achieve success for developing their profession.

Practicum I approach stands on the importance of the individualized attention given to each nursing student independently. Each nursing student, monitored by the instructor and the university tutor will define his/her own learing outcomes according to established competences.

All credit hours are presential, according to the Real Decreto 1837/2008, which specifies that all nursing students are required to complete 2.300 hours of clinical practice.

During praticum learning process, at least three tutorials will be held:

First Tutorial. At the beginning of the external experiential education period. Learning contract will be undertaken.

Second Tutorial. At the mid-point of the external experiential education period. Students' learning process and the achievement of learning outcomes will be valued and enhanced, learning education process will be conducted.

Third Tutorial. At the end of the external experiential education period, practicum evaluation will be held, evaluation of the learning outcomes and competences established at the beginning of the course.

Evaluation

The evaluation is a continuous process in which the students demonstrate and argue their learning process progress, as well as, competence improvement and achievement. University tutor will evaluate students' clinical practices, based on clinical instructor and students' own informs, according to established evaluation guidelines and tools.

According to established regulations for students' evaluation of official UPV/EHU's degrees, each student will have for this course one ordinary evaluation session each year only.

Clinical Practice Commission has the legal authority to decide in special and justified cases, the extension of the ordinary evaluation session within the academic year. This exception will not involve clinical practices that have been conducted and not approved for this session/call.

Extraordinary evaluation session: information and course dropping

None.

Links.-

https://egela.ehu.es/ Course: Practicum I
http://gestion.ehu.es/gaur
https://www.ehu.eus/es/web/enfermeria-leioa/praktika-klinikoak

25212: PUBLIC HEALTH

LEARNING OUTCOMES

1. Identify the different factors that influence health.

Reflect on the current situation of the epidemiological pattern and the risks that influence it.

Relate the epidemiological pattern with the levels of prevention and interventions in the field of Public Health.

Reflect on the individual and social responsibility of health in society.

Reflect on the importance of educating the population in order to have an impact on higher levels of health.

Analyze the importance of the role biological determinants of health play in human beings.

2. Know how to identify the main mechanisms of the infectious process to break the infectious chain and know the appropriate measures to implement in the community.

Identify the stages of infectious disease.

Recognize the mechanisms involved in the infectious process.

Describe control measures for the prevention of nosocomial infections.

Identify the different infectious diseases according to the transmission model.

Describe and justify the nursing actions applied in the different phases of the infectious process to break the infectious chain.

THEORETICAL-PRACTICAL CONTENT

1. Introduction to Public Health. Health determinants.

1.1. Health and disease. Concept of health. Determinants of health. Public Health: concept and functions.

1.2. Environmental health determinants. Physical and chemical factors. Food contamination: water, soil, additives.

1.3. Social determinants of health. Social justice and health inequalities. Response to inequities.

1.4. Structural Interventions in Public Health. Health promotion. Health education.

1.5. Sanitary systems. Models. Spanish health system. Department of Health of the Basque Government and Osakidetza-Basque Health Service.

2. Biological determinants of health. Microbiology and immune system

2.1. Microbial world. Classification and nomenclature. Relationship to humans: colonization, infection, disease.

2.2. Viruses and prions. Structure Classification. Viral reproduction.

2.3. Bacteria. The prokaryotic cell and its structures. Metabolism and bacterial growth. Basic concepts of bacterial genetics: plasmids, mutations, genetic exchange.

2.4. Fungi. Structure of fungal eukaryotic cells. Molds and yeasts. Metabolism and growth. Dermatophytes. Superficial mycoses and deep mycoses.

2.5. Parasites. General characteristics. Protozoa and helminths. Protozoa. Metabolism and growth. Helminths. Nematodes and Plathelminths.

2.6. Immune system. Unspecific immunity. Natural barriers. Unspecific mechanisms: inflammation, complement system, phagocytosis, NK cells, cytokines.

2.7. Specific immunity. General characteristics. Humoral immunity: B-lymphocytes and antibodies. Cellular immunity: major histocompatibility complex, antigen-presenting cells, T-lymphocytes. Primary and secondary response. Active and passive immunization.

3. Epidemiology and prevention of communicable diseases

3.1. Epidemiology. Concept, statistical methods. Epidemiology research designs: analytical, descriptive studies. Frequency measurements. Association and impact measures. Biases. Cases of causality.

3.2. Evaluation of diagnostic tests. Internal and external validity (Likelihood ratio) Validity of continuous tests: ROC curves. Secondary prevention: Screening

3.3. Public Health Information Systems. Surveys, registers and notification systems. Census system. Sampling system: national health survey. Obligatory notifiable diseases.

3.4. Communicable diseases. Presentation patterns. Epidemiological chain: etiological agent, reservoir/source of infection, carrier, susceptible host, transmission. Dynamics of transmissibility and disease. Quantitative aspects in epidemiology of communicable diseases. Measures for the prevention of infectious diseases.

3.5. Vaccines. Immunization. Systematic and non-systematic vaccines. Routes of administration. Contraindications. Age groups. Child and adult vaccination schedule. New vaccines. Special situations. Pregnancy and lactation. Vaccines of the traveler. Vaccine effectiveness, coverage

3.6. Antimicrobials. Mechanisms of resistance. Rational use of antibiotics.

3.7. Sexually transmitted infections. Etiological agents. Descriptive epidemiology. Prevention and treatment of STIs. Descriptive epidemiology of HIV infection. Risk factors. Prevention and treatment.

3.8. Viral hepatitis

3.9. Tuberculosis, legionellosis. Etiological and clinical agent: diagnosis. Descriptive epidemiology. Prevention and control

3.10. Influenza and meningococcal disease.

3.11. Cholera, typhoid fever, polio.

3.12. Healthcare-associated infections. Sterilization, disinfection, antisepsis and asepsis. Hand washing. Isolation measures.

3.13. Food intoxication and toxic infections.

3.14. Malaria, dengue fever and yellow fever. Vector transmission.

3.15. Emerging infectious diseases. Eradication of infectious diseases.

Student's guide

General and Clinical Pharmacology

General and Clinical Pharmacology is a core subject in the 3rd year of the Undergraduate Course in Dentistry. The main objective of this subject is that the students learn to use drugs rationally in their future dental practice. The subject is divided into three main blocks:

I. In the first, general aspects of pharmacology, pharmacokinetics nd pharmacodynamics are covered. These concepts will be used in the next two blocks in the subject.
II. In the second block, the most commonly used and prescribed drugs in dental clinical practice will be studied in depth.
III. In the third, drugs that although not currently prescribed in dental practice that can have an influence in the clinical practice or patient management will be studied.

1. Content of the subject

4.1. Theoretical content

Block I

Topic 1. Introduction to Pharmacology

Topic 2. Absorption of drugs

Topic 3. Distribution of drugs in the body

Topic 4. Metabolism of drug excretion

Topic 5. Pharmacodynamics. Drug action mechanism

Topic 6. Adverse reactions to drugs. Pharmacological interactions

Topic 7. Adrenergic neurotransmission. Alpha- and beta-adrenergic drugs. Antiadrenergic drugs

Topic 8. Cholinergic neurotransmission. Cholinergic drugs. Anticholinergic drugs

Block II

Topic 9. Local anesthetics

Topic 10. Benzodiazepines. Other anxiolytic and sedating-hypnotic drugs. Central action muscle relaxants

Topic 11. Nitrous oxide

Topic 12. Nonsteroidal anti-inflammatory drugs (NAIDs). Other analgesics

Topic 13. Steroidal anti-inflammatory drugs.

Topic 14. General features of anti-infective chemotherapy

Topic 15. Beta-lactam antibiotics

Topic 16. Macrolide antibiotics. Clindamycin

Topic 17. Nitroimidazoles

Topic 18. Tetracycline

Topic 19. Other antibacterial pharmacological groups

Topic 20. Antifungal drugs

Topic 21. Antiviral drugs

Topic 22. Antiseptics. Fluorides

Block III

Topic 23. Opiate analgesics

Topic 24. Antidepressant drugs Antipsychotic drugs

Topic 25. Antiparkinsonian and antiepileptic drugs. General anesthetic

Topic 26. Pharmacology of the cardiovascular system I

Topic 27. Pharmacology of the cardiovascular system II

Topic 28. Pharmacology of the respiratory tract

Topic 29. Antihistamine H drugs$_1$

Topic 30. Pharmacology of the digestive tract

Topic 31. Hormonal pharmacology I

Topic 32. Hormonal pharmacology II

Topic 33. Antineoplastic drugs. Immunostimulant and immunosuppressive drugs

4.2. Practical content

The practical content in the subject is spread over 10 practical sessions in the classroom, 1 computer practical session and 7 seminars

2. Assessment

Ordinary call

The assessment system is mixed:

Written theoretical assessment

Instrument: final written exam combining 2-3 multiple choice questions, 1-2 problems, 2-3 clinical cases and 10-12 questions with short answers.
Assessment criteria: information provided, reasoning, ability to summarize and precision in the use of language. Each of the three blocks in the subject must be passed.
Percentage of the final grade: **70%**

Practical assessment

Instrument: final practical work report (classroom and computer) and active participation in classroom practical work sessions.
Assessment criteria: identification of the objectives proposed, information contained, ability to analyze and solve the issues presented correctly.
Percentage of the final grade: **15%**

Continuous assessment of face-to-face activities and independent work

Instrument: participation in seminars and 3 mid-course assessments (30-35 multiple-choice questions, 5 possible answers and just one right)
Assessment criteria: adaptation of the content, information provided, reasoning and ability to communicate the information (assessment templates designed for the purpose will be used). Results of the mid-course assessments.
Percentage of the final grade: **15%**

Extraordinary call

The extraordinary call is governed by the same criteria as the ordinary call. Students may request that the grade they achieve in the practical work assessment and the continuous assessment of face-to-face activities and independent work should be maintained.

27272 Basic Medical Histology

HMG-1.- Understand microscopic structure and the function of the elements of the human body in the state of health. Analyze the principles on which current scientific methodology applied to this discipline is based and analyze scientific texts from a critical perspective on their content.
HMG-2.-Learn about the concept and classification of human tissues and their embryological origin. Identify the different elements of each of the tissues, both in their theoretical aspect and through the use of the microscope.
HMG-3.- List the supramolecular organization and the functional activity of tissues, as well as the molecular and physiological basis that makes this organization possible. Apply the bio pathological principles that govern tissue lesions.
HMG-4.-Understand the structure and function of the elements of the human body in terms of state of health. Analyze the principles on which the current scientific methodology is based for this discipline and analyze scientific texts, reflecting on their content in a critical way.
HMG-5.- Learn about the characteristics and the embryological elements of the cellular and tissue elements of the organs, systems and tracts, both in their theoretical aspect and identifying them using the microscope.
HMG-6.- List the tissue organization and the functional activity of organs, tracts and systems, as well as the cellular molecular and physiological bases of their activity.

1. Learn about the microscopic structure of tissues and organs of the nervous, cardiovascular and immune systems, and of the basic characteristics of embryo development and the organogenesis of these organs; be able to relate the structure to the function and its importance in the bases of a pathology, integrated this knowledge with that of other biomedical disciplines; be able to make a critical analysis and provide answers to questions or problems with a histological basis, using the correct scientific terminology.

2. Make a critical analysis, identify tissues and tissue structures and answer questions or problems on issues related to the morphology, structure and function of basic tissues in the body and of the nervous, cardiovascular and immune systems.

3. Be able to recognize, in microscope images, the characteristic structures of the different tissues and organs that make up the nervous, cardiovascular and immune systems.

5.- ASSESSMENT SYSTEM

Assessment method	% of final mark	Learning objective
1.- Written theoretical assessment (2)		1
• 1 multiple-choice test, only one correct answer, penalty of (-0.33) for a wrong answer. • A minimum grade of 4.75/10 must be obtained in the assessment.		
2.- Oral and/or practical assessment (one or more specific tests)		2, 3
• Microscope image recognition test (minimum grade = 6/10)		
3.- Continuous assessment of face-to-face activities and independent work	20	2, 3
• Assessment of activities in Practical Classroom Work (15%). Minimum grade: 4/10 • Continuous assessment of face-to-face activities (20%): practical work reports (5%) +one-off assessments (5%) + classroom practical work (10%).		

Remarks:

* Assessments may be made at any time during the course.
* The minimum mark in each assessment is used for the calculation of the overall grade and for passing the subject.
* Although theoretical and practical exercises may be done on the same day, the practical ones will be corrected first. If the minimum mark is not reached, the theoretical exercise will not be corrected.
* The practical work grade will not be carried over to the extraordinary exam call.

* To withdraw from continuous assessment, the student must request it 9 weeks before the official date of the ordinary assessment, by filling in and handing in the form for this purpose. For these students, the assessment system will be the same as in the Extraordinary Call.

The subject "Clinical Microbiology and Infection" sets out to give an overall vision of infectious diseases from the etiological point of view. The etiology and the pathogenicity mechanisms of the main infectious processes, the correct steps and clinical samples to make a laboratory diagnosis, and an analysis of the microbiological factors that determine antibacterial treatments. The main aim is to acquire the necessary knowledge to establish a strategy and a diagnostic opinion on microbial diseases, indicate a safe and efficient course of treatment and propose the most suitable preventive measures.

SYLLABUS

Infection and infectious disease

Immune response to an infection

Anti-infectious immunotherapy

Microbiological basis for a diagnosis of infections

Criteria for the rational use of antibiotics

ETIOPATHOGENICS, DIAGNOSIS AND ANTIBIOTICL TREATMENT OF INFECTIONS

Respiratory infections

Urinary tract infections

Cutaneous, subcutaneous, osteoarticular and muscular infections

Central nervous system infections

Sexual transmission infections

Obstetric, congenital and perinatal infections

Infections in an immunodepressed patient. Infections related to healthcare

Digestive tract infections

NEW INFECTIOUS CHALLENGES

The major infectious threats. Emerging infections

Infections in a globalized world

Travelers' infections

Old and new challenges of resistance to antibiotics

- Seminars
  Emerging/re-emerging pathogens (Middle East Respiratory Syndrome (MERS), Crimean–Congo hemorrhagic fever (CCHF))
- Laboratory practical work
  Indication and interpretation of complementary diagnosis studies on infections. Taking and processing of clinical samples for microbiological study. Evaluation, monitoring and follow-up of antibiotic therapy. Immunodiagnostics

ORDINARY EXAM CALL

Theoretical assessment: exam of 60 multiple-choice with one correct answer. Each correct answer = 1 point, and each wrong answer means that 0.3 points will be subtracted. Unanswered questions will not be penalized. Of the 60 questions, 48 are related to the subject taught in lectures, and they may include notions worked on in practical laboratory sessions. Twelve questions will be about clinical problems worked on and solved in the practical classroom sessions. This exam must be passed to pass the subject as a whole. The marks of the other assessments will not be added if this part of the assessment is no passed.

Practical assessment: questions based on images or tests with an overall weight of 15 points. For each incorrect answer one point is subtracted. This mark will be added to the total grade (only if the test is passed). Attendance is compulsory, and this percentage will not be added to the final mark if the student's absence is not sufficiently justified.

Furthermore, attendance, active participation, and the presentation and level of correctness of projects all contribute to the final mark. Practical classroom work accounts for 50% of this section, clinical laboratory practical work 25% and seminars 25%. Presentations (posters or oral) of both kinds of activity will be graded with a maximum 10 points to calculate the overall grade.

Attendance at all programmed activities is compulsory. A lack of active participation of non-compliance of rules will be penalized by subtracting 0.5 points per day of practical work.

If the student does not show up for assessments this will be considered as a withdrawal from the call and will appear as "Not presented".

Students may be assessed under the final assessment (exam) system, regardless of whether they have participated in the continuous assessment system or not. To do this, they should apply in writing to withdraw from continuous assessment within 9 weeks of the start of the term. In this case, they must a sit a multiple-choice exam (only one answer correct) and a practical exam.

Universidad del País Vasco Euskal Herriko Unibertsitatea

COURSE GUIDE2019/20

Faculty 327 - Faculty of Medicine and Nursing

Degree GODONT30 - Bachelor`s Degree in Dentistry

Course Implantology

COURSE DESCRIPTION

Implantology (UNESCO code 329900) is a subject belonging to the m06 optional module taught during the second quarter of year 5 in the Dentistry Master Degree.

This subject is worth 6 ECTS and is divided into: teaching, in and outside class modalities as summarised in the table.

This subject aims for the student to become competent in: establishing a diagnosis, prognosis and execution of a correct therapeutic plan in cases of partially or totally edentulous via dental implants. To establish diagnosis and treatment plan, a student must be capable of taking and interpreting X-rays and other imaging procedures relevant to dentistry. The student must also be skilled in determining and identifying the patient's aesthetic requirements likewise the possibilities of satisfying his/her curiosity.

The specific subject skills are detailed in the 'contents description' section of M06 optional module.

COMPETENCIES/LEARNING RESULTS FOR THE SUBJECT

Specific Implantology skills

	Skills
IP1	Acquire and develop basic implantology and osseointegration knowledge for their application in the diagnosis and treatment of edentulous cases where these techniques can be applied.
IP2	Use said knowledge to coherently resolve clinical cases.
IP3	Draft the clinical history and examine tissues.
IP4	Perform or request complementary tests (X-ray, Scan, and Laboratory.)
IP5	Issue a case diagnosis.
IP6	Establish a treatment plan.

IP7	Analyse, discuss, summarise and express scientific information corresponding to implantology.
IP8	Team work in co-operative implantology tasks, i.e. Help with assistance tasks, discuss diagnoses and co-operate with treatments.
IP9	Show a favourable attitude towards self-learning in implantology, being active and participative in resolving problems and continuous updating.

COURSE CONTENTS, THEORETICAL & APPLIED

Subject syllabus

The syllabus is divided into 6 blocks:

1. Osseointegration, implant design and its implications.
2. Diagnosis and therapeutic planning.
3. Totally edentulous.
4. Partially edentulous.
5. Increased bone availability.
6. Implant complications, results and maintenance.

Each block is subdivided into the following topics:

a) Osseointegration, implant design and its implications.
   - Topic 1: Bone healing and osseointegration.
   - Topic 2: Implant designs and surfaces.

b) Diagnosis and therapeutic planning.
   - Topic 3: Clinical history, examination and diagnosis via imaging.
   - Topic 4: Treatment plan.

c) Totally edentulous.
   - Topic 5: Surgical aspects.
   - Topic 6: Restorative aspects and options.

d) Partially edentulous.
   - Topic 7: Surgical aspects.
   - Topic 8: Prosthetic aspects.

e) Increased bone availability.
   - Topic 9: Guided bone regeneration.
   - Topic 10: Monocortical bone grafts.
   - Topic 11: Elevation of maxillary sinus floor and alveolar distraction.

f) Implant complications, results and maintenance.
   - Topic 12: Failures and complications.
   - Topic 13: Peri-implant infections.
   - Topic 14: Implant survival and success rate.
   - Topic 15: Maintenance in implant therapy.

TEACHING METHODS

TOPIC AREA CHOSEN FOR: MASTERCLASSES, SEMINARS & CLINICAL PRACTICE

The **IMPLANTOLOGY** syllabus can be subdivided into 2 large blocks:

I/ Partially edentulous refers to treatment via prosthetic implant in patients lacking only one or a few teeth.

II/ Totally edentulous refers to treatment via prosthetic implant in edentulous patients.

Teaching will be different in each case.

I/ **Partially edentulous**. In the second quarter of year 5 in the Dentistry Degree, when the optional subject Implantology is first taught, there are only 4 months left to complete degree studies; and students have already acquired vast theoretical knowledge on surgery and prostheses, so they will be skilled in performing rehabilitations via removable partial/complete and permanent prostheses. They know the basic principles of occlusion and have studied the associated pathology. Furthermore, they have developed clinical and surgical skills during the last 3 years performing multidiscipline treatments at the University of the Basque Country UPV/EHU Dental Clinic. All the foregoing, enables students under strict supervision and after training through the implantology subject to rehabilitate straightforward cases of patients missing single teeth or partially edentulous via implants at the Dental Clinical. 84 out of the 150 hours of the subject would be used for this, i.e. 56% of the entire subject and 40% of the topics tackled. The topics tackled are:

TOPIC AREA CHOSEN FOR PBL APPLICATION.

JUSTIFICATION

II/ **Totally edentulous**. There are situations where rehabilitation with prosthetic implant is highly complex requiring specific training in advanced diagnostic, surgical and prosthodontic techniques. For this reason the study of these complex scenarios is best via an active methodology like PBL.

To correctly tackle these complex situations, students must: [1] have exhaustive critical knowledge of different implant surfaces and designs; [2]understand the importance of planning; [3]be able to handle new imaging analysis and prosthetic design technologies; and [4]know bone availability increase techniques. Therefore, they will attend 7 hours of masterclasses, 3 hours of seminars and 18 hours of class practice. Thus 44% of the total hours for the subject will be imparted via PBL methodology, tackling 60% of the syllabus:

a) Osseointegration, implant design and its implications.
- Topic 1: Bone healing and osseointegration.
- Topic 2: Implant designs and surfaces.

b) Diagnosis and therapeutic planning (for totally edentulous).
- Topic 3: Clinical history, imaging diagnosis and examination.
- Topic 4: Treatment plan.

c) Totally edentulous.
- Topic 5: Surgical aspects.
- Topic 6: Restorative aspects and options.

e) Bone availability increase (for totally edentulous).
- Topic 9: Guided bone regeneration.
- Topic 10: Monocortical bone grafts.
- Topic 11: Elevation of maxillary sinus floor and alveolar distraction.

f) Implant complications, results and maintenance (for totally edentulous).
- Topic 12: Failures and complications.
- Topic 13: Peri-implant infections.
- Topic 14: Implant survival and success rate.
- Topic 15: Implant therapy maintenance.

TYPES OF TEACHING

ECTS, teaching modalities, in and outside class hours

Type	Hours in-class	Hours outside-class	Total	ECTS
Masterclasses	17	34	51	2.04
Seminars	6	12	18	0.75
Class practice	18	18	36	1.44
Laboratory practice	0			
Computer practice	0			
Clinical practice	30	15	45	1.8
Total	71	79	150	6

Evaluation methods

- End-of-course evaluation

Evaluation tools and percentages of final mark

50% of the mark corresponds to assessment of the subject using PBL methodology and the other 50% for the rest of the subject.

ORDINARY EXAMINATION PERIOD: GUIDELINES AND OPTING OUT

Type	Assessment of PBL imparted syllabus (%)	Assessment of rest of syllabus (%)	Total
Individual tests	10		10
Final individual test on minimum knowledge	15	20	35
Oral presentations	10	10	20
Portfolio	15		15
Clinical practice attitude and participation		10	10
Clinical Practice Register		10	10
TOTAL	50	50	100

EXTRAORDINARY EXAMINATION PERIOD: GUIDELINES AND OPTING OUT

The same

MANDATORY MATERIALS

Universidad del País Vasco Euskal Herriko Unibertsitatea

BIBLIOGRAPHY

1. Bassetti, M., Kaufmann, R., Salvi, G.E., Sculean, A. & Bassetti, R. 2015, "Soft tissue grafting to improve the attached mucosa at dental implants: A review of the literature and proposal of a decision tree", Quintessence international (Berlin, Germany : 1985), vol. 46, no. 6, pp. 499-510

2. Buyukozdemir Askin S, Berker E, Akincibay H, Uysal S, Erman B, Tezcan İ, Karabulut E. Necessity of keratinized tissues for dental implants: a clinical, immunological, and radiographic study. Clin Implant Dent Relat Res. 2015 Feb; 17(1):1-12. doi: 10.1111/cid.12079. Epub 2013 Apr 30. PubMed PMID: 23631746.

3. Capelli M. Surgical, biologic and implant-related factors affecting bone remodelling around implants. Eur J Esthet Dent. 2013 Summer; 8(2):279-313. Review. PubMed PMID: 23712347.

4. Cooper LF, Pin-Harry OC. "Rules of Six"--diagnostic and therapeutic guidelines for single-tooth implant success. Compend Contin Educ Dent. 2013 Feb; 34(2):94-8, 100-1; quiz 102, 117. PubMed PMID: 23556318.

5. Cordaro, L., Terheyden, H., Wismeijer, D., Chen, S. T., Buser, D., International Team for Oral Implantology, & ITI Consensus Conference. (2014). *ITI treatment guide: A staged approach*. Berlin: Quintessence Publishing Co. Ltd.

6. Cosgarea R, Gasparik C, Dudea D, Culic B, Dannewitz B, Sculean A. Peri-implant soft tissue colour around titanium and zirconia abutments: a prospective randomized controlled clinical study. Clin Oral Implants Res. 2015 May; 26(5):537-44. doi: 10.1111/clr.12440. Epub 2014 Jun 24. PubMed PMID: 24961535.

7. Esposito M, Maghaireh H, Pistilli R, Grusovin MG, Lee ST, Gualini F, Yoo J, Buti J. Dental implants with internal versus external connections: 1-year post-loading results from a pragmatic multicentre randomised controlled trial. Eur J Oral Implantol. 2015 Winter; 8(4):331-44. PubMed PMID: 26669544.

8. Ferrari M, Cagidiaco MC, Garcia-Godoy F, Goracci C, Cairo F. Effect of different prosthetic abutments on peri-implant soft tissue. A randomized controlled clinical trial. Am J Dent. 2015 Apr; 28(2):85-9. PubMed PMID: 26087573.

9. Greenberg AM. Digital technologies for dental implant treatment planning and guided surgery. Oral Maxillofac Surg Clin North Am. 2015 May; 27(2):319-40.doi: 10.1016/j.coms.2015.01.010. Review. PubMed PMID: 25951962.

10. Greenstein G, Cavallaro J. Failed dental implants: diagnosis, removal and survival of reimplantations. J Am Dent Assoc. 2014 Aug; 145(8):835-42. doi:10.14219/jada.2014.28. PubMed PMID: 25082932.

11. Hämmerle CH, Cordaro L, van Assche N, Benic GI, Bornstein M, Gamper F, Gotfredsen K, Harris D, Hürzeler M, Jacobs R, Kapos T, Kohal RJ, Patzelt SB, Sailer I, Tahmaseb A, Vercruyssen M, Wismeijer D. Digital technologies to support planning, treatment, and fabrication processes and outcome assessments in implant dentistry. Summary and consensus statements. The 4th EAO consensus conference 2015. Clin Oral Implants Res. 2015 Sep; 26 Suppl 11:97-101. doi:10.1111/clr.12648. PubMed PMID: 26385624.

12. ITI TREATMENT GUIDE IMPLANT THERAPY IN THE ESTHETIC ZONE SINGLE TOOTH REPLACEMENTS VOL 1 (HB 2007) BELSER U ISBN 10: 3938947101 ISBN 13: 9783938947104

13. ITI Treatment Guide: Implant Therapy in the Aesthetic Zone for Single-tooth Replacements U. Belser, W. Martin, R. Jung, C. Hammerle, B. Schmid, Daniel Buser (Editor), Urs Belser (Editor), Daniel Wismeijer (Editor) Published by Quintessenz Verlag (2007)

14. Jervøe-Storm PM, Jepsen S, Jöhren P, Mericske-Stern R, Enkling N. Internal bacterial colonization of implants: association with peri-implant bone loss. Clin Oral Implants Res. 2015 Aug; 26(8):957-963. doi: 10.1111/clr.12421. Epub 2014 May 26. PubMed PMID: 24861845.

15. Karunagaran S, Markose S, Paprocki G, Wicks R. A systematic approach to definitive planning and designing single and multiple unit implant abutments. J Prosthodont. 2014 Dec; 23(8):639-48. doi: 10.1111/jopr.12161. Epub 2014 Jun 10.PubMed PMID: 24916855.

16. Klokkevold PR. Cone Beam Computed Tomography for the Dental Implant Patient. J Calif Dent Assoc. 2015 Sep; 43(9):521-30. PubMed PMID: 26820009.

17. Pisoni L, Ordesi P, Siervo P, Bianchi AE, and Persia M, Siervo S. Flapless Versus Traditional Dental Implant Surgery: Long-Term Evaluation of Crestal Bone Resorption. J Oral Maxillofac Surg. 2016 Jul; 74(7):1354-9. doi: 10.1016/j.joms.2016.01.053. Epub 2016 Feb 13. PubMed PMID: 26954560.

18. Rosenbaum N. Full-arch implant-retained prosthetics in general dental practice. Dent Update. 2012 Mar; 39(2):108-10, 112, and 114-6. PubMed PMID: 22482268.

19. Sun X, Zhai JJ, Liao J, Teng MH, Tian A, Liang X. Masticatory efficiency and oral health-related quality of life with implant-retained mandibular overdentures. Saudi Med J. 2014 Oct; 35(10):1195-202. PubMed PMID: 25316463; PubMed Central PMCID: PMC4362122

20. Thoma DS, Mühlemann S, Jung RE. Critical soft-tissue dimensions with dental implants and treatment concepts. Periodontal 2000. 2014 Oct; 66(1):106-18. doi: 10.1111/prd.12045. Review. PubMed PMID: 25123764.

21. Torroella-Saura G, Mareque-Bueno J, Cabratosa-Termes J, Hernández-Alfaro F, Ferrés-Padró E, Calvo-Guirado JL. Effect of implant design in immediate loading. A randomized, controlled, split-mouth, prospective clinical trial. Clin Oral Implants Res. 2015 Mar; 26(3):240-4. doi: 10.1111/clr.12506. Epub 2014 Oct 18.PubMed PMID: 25327537.

22. Van Deweghe S, Koole S, Younes F, De Coster P, De Bruyn H. Dental implants placed by undergraduate students: clinical outcomes and patients'/students' perceptions. Eur J Dent Educ. 2014 Mar; 18 Suppl 1:60-9. doi: 10.1111/eje.12077. PubMed PMID: 24484521.

23. Van Lierde KM, Browaeys H, Corthals P, Matthys C, Mussche P, Van Kerckhove E, De Bruyn H. Impact of fixed implant prosthetics using the 'all-on-four' treatment concept on speech intelligibility, articulation and oromyofunctional behaviour. Int J Oral Maxillofac Surg. 2012 Dec; 41(12):1550-7. doi: 10.1016/j.ijom.2012.05.018. Epub 2012 Jun 20. PubMed PMID: 22721925.

24. Von Wilmowsky C, Moest T, Nkenke E, Stelzle F, Schlegel KA. Implants in bone: part II. Research on implant osseointegration: material testing, mechanical testing, imaging and histoanalytical methods. Oral Maxillofac Surg. 2014 Dec; 18(4):355-72. doi: 10.1007/s10006-013-0397-2. Epub 2013 Feb 21. Review. PubMed PMID: 23430020.

Teaching guide: Interpretation of clinical analysis

Description and Contextualization of the Subject:

The subject involves the study of routine and emergency analyses used in clinical practice. It will constitute an approach to knowledge of the analytical expression of major clinical health alterations and the role of Nursing in the clinical analysis laboratory.

Competencies/learning outcomes of the subject:

- General Competences:
  G140: To be able to provide appropriate technical and professional care for the health needs of people in the field of nursing. This should be in accordance with the state of development of scientific knowledge and with the levels of quality and safety established in the applicable legal and ethical regulations.
  G145: To base nursing interventions on scientific evidence and available resources.
  G153: To establish evaluation mechanisms, considering scientific-technical and quality aspects.
- Learning Outcomes:
  The student should acquire the knowledge that enables him/her to understand the role of Nursing in the pre-analytical phase, for the correct execution of analytical processes and to know how to interpret the analytical parameters of routine laboratory work in a basic way.

Theoretical-practical contents

Lectures:

1. Role of Nursing in the pre-analytic phase: Definition of the pre-analytical phase and the role of nursing in the different constitutive processes: request for tests, preparation of the patient, obtaining the sample, conservation and stability, interferences.
2. Interpretation of hematological results: Basic study of hematimetry and hemostasis. Approximation to hematological alterations and coagulation of greater clinical prevalence and their analytical expression.
3. Interpretation of biochemical results: Basic approach to routine and emergency biochemistry. Approximation to the biochemical expression of the most common respiratory, cardiovascular, digestive, renal and endocrine-metabolic pathologies.
4. Infectious serology: Basic study of serological markers in viral hepatitis, HIV infection and others.

Supervised seminars: Laboratory findings in the most clinically relevant health disorders.

La—y-ua.ctjces.; Basic urinalysis test.

Methodology

The subject includes lectures in which the transmission of theoretical knowledge is made by the teacher.

Laboratory practical work is also carried out, so that the student can consolidate, expand and verify the theoretical program, through experimentation with a basic analysis of urine and

completing the practical exercises provided by the teacher. Laboratory practical work is compulsory.

In the seminars, students will work in groups on a topic, including an oral presentation. Likewise, they will have to present written work.

Evaluation systems

Ordinary Call. Guidelines

- Multiple-choice test (questions about the master program, practical work and seminars):

- Practical work (practical exercise on routine urine analysis): 10%
- Teamwork (problem solving, project design, written or/ and oral presentation): 30%

All three parts must be passed (50% or more in the test, practical work and teamwork) to pass the subject as a whole.

Extraordinary Call: Guidelines

Only those students who justify any of the reasons indicated in Article 43 of the Regulation may withdraw from mixed assessment. If this is not the case, the student must apply on the School's website ("Calendar procedures"), providing the appropriate supporting documents depending on the deadlines. Students may submit their withdrawal to the teacher no less than 30 days before the starting date of the official examination period (article 39 of the Management Regulations for First and Second Cycle Degree Courses).

In the final assessment the student must prove that he/she has acquired the required knowledge and skills of the subject.

Compulsory materials

These will be handed out in the presentation of the subject

Bibliography

Books

- Hall J. Guyton and Hall Textbook of Medical Physiology. Saunders (US); 13e. ISBN-13: 978-1455770052
- LeFever J. Handbook of Laboratory and Diagnostic Tests with Nursing Implications. Pearson Education (US); 9 e. ISBN-13: 978-0133139051
- Weatherby, D., Ferguson S. Blood Chemistry and CBC Analysis: Clinical Laboratory Testing from a Functional Perspective. Emperors Group LLC. ISBN-13: 9780976136712

Web addresses

- American Association for Clinical Chemistry. https://labtestsonline.org/
- Nursing Center. www.nursingcenter.com

Universidad del País Vasco Euskal Herriko Unibertsitatea

SUMMARY OF THE STUDENT'S GUIDE

PHARMACOLOGY IN PHYSIOTHERAPY

1. Data on the subject

Center	Faculty of Medicine and Nursing
Qualification	Undergraduate Degree in Physiotherapy
Department	Pharmacology
Subject	Pharmacology in Physiotherapy
ECTS credits	6
Module	M01: "Therapeutic Procedures with Drugs"
Academic Year	
Course	Second
Group	01/31
Term	Second
Language	Spanish/Basque
Nature	Basic of OTHER branches

Prof. María Torrecilla (Coordinator)
e-mail maría.torrecilla@ehu.eus
Tutorial consult GAUR

2. Competencies in the Subject

The general competencies worked on in the subject, in line with the study program approved by the Ministry of Education, are (order CIN2135/2008):

G003. Learn and understand the methods, procedures and actions of physiotherapy, aimed both at the therapy to be applied in clinical practice for functional re-education or recovery and for the performance of activities to promote and maintain health.

G012. Intervene in the areas of promotion, prevention, protection and recovery of health.

G017. Understanding the importance of updating the knowledge, skills and attitudes that make up the professional skills of a physiotherapist.

The **learning outcomes** to be achieved by the students are:

RA1. Understanding the basics of pharmacokinetics and pharmacodynamics and the factors that intervene in drug responses.

RA2. Identify the basic aspects of drugs that act on the vegetative and neuromuscular nervous system, other systems and tracts, and of chemotherapy drugs. Differentiate the main routes of drug administration through the skin and drugs for topical application in physiotherapy and sports medicine.

RA3. Evaluate the effect of drug therapy in the effectiveness of the physical and physiotherapeutic treatments and the possible effects of the pharmacological agents in the prevention of increase of risk of lesions.

RA4. Analyze the influence of certain rehabilitation procedures on the effects of drugs.

RA5. Defend the importance of therapy with drugs being safe and effective, contributing to the correct use of medication in relation to patients, families and the community in general.

	3. Program
Syllabus Theoretical (CM)	**Part I: General concepts and mechanisms involved in the action of drugs and the processes of absorption, distribution, metabolism and excretion associated with them.** **Part II. Pharmacology of the vegetative and peripheral nervous system** **Part III. Pharmacology of systems and tracts** **A.- Cell mediators. Inflammation. Peripheral and central pain.** **B.- Other tracts and systems** **C.- Hormones. Vitamins** **D.- Chemotherapy**
Practical activities	**SEMINARS (S)** (S1) Pharmacokinetics - the effect of physical activity on pharmacokinetics. (S2) Doping in sport and the abuse of medication and drugs. **PRACTICAL CLASSROOM WORK (PA)** (PA1 & 3) Pharmacological targets and pharmacodynamic parameters. (PA2) Pharmacokinetics - the effect of physical activity on pharmacokinetics. (PA4) Non-steroid anti-inflammatory drugs. Topical application of drugs. (PA5) CNS pharmacology. (PA6) Pharmacological treatment of asthma. (PA7) Cardiovascular and blood pharmacology. (PA8) Problem-solving in interactions between drugs and other physiotherapy treatments. (PA9) Antibiotics and antiviral drugs. **LABORATORY PRACTICAL WORK (PL)** (PL1) Elimination of salicylates. (PL2) Pharmacology of pain. (PL3) Pharmacology of motor disorders - Parkinson's disease. (PL4) Pharmacology of diabetes: simulation of blood sugar regulation through the administration of insulin and adjusting carbohydrate intake. **COMPUTER PRACTICAL WORK.** Attendance is compulsory. - (PO1). Sources of information and learning in Pharmacology: handling pharmacopoeia, Forms and Catalogues of specialties.

4. Assessment

Continuous assessment system.
The continuous assessment system consists of a final written exam and tasks performed by the student that are assessed during the practical classroom sessions with computers, laboratory work and seminars, as well as during non-face-to-face hours of the subject.

Universidad del País Vasco Euskal Herriko Unibertsitatea

STUDENT'S GUIDE

DEVELOPMENTAL GENETICS BIOLOGY
Undergraduate Degree Course in Medicine
1st year, 2nd term
Module 1
Core subject
Coordinator: Laura Gomez Santos

Summary of the theoretical content taught in lectures (1h face-to-face/lecture):

O. PRESENTATION OF THE SUBJECT
1. GENOMA, GENES AND GENE EXPRESSION
2. CELL REPRODUCTION
3. FERTILISATION AND HEREDITY
4. 4. DEVELOPMENTAL BIOLOGY

26 hours of class attendance
Independent hours worked: 39 individual work

Other training activities:
Seminar: 20-25 students, group work.
Practical work in the classroom
Practical work in the laboratory

ASSESSMENT SYSTEM

FINAL ASSESSMENT

- INTEGRATION OF CONCEPTS EXAM:

75% of the final grade.
Theoretical questions, problems of application, interpretation of graphics, description of micro photos or tables, performance of drawings or outlines of cellular processes, summary of figure captions, etc. The accuracy of the theoretical concepts applied will be graded, together with the ability to summarize and expression in the correct scientific language, and the correct nature of the conclusion reached following an analysis of the data provided. Correct spelling and grammar will also be considered. The theoretical content given in lectures and the work done in seminars and practical session will also be evaluated.

-PRACTICAL EXAM:

10% of the final grade.
Identification and description of biological structures and processes, both seen in optical and electronic microscope micro photos and in histological sections. This exam must be passed (5 points out of 10) to take the Written Exam on Integration of Concepts later. The pass mark will be held for two academic years, regardless of whether the student sits the written exams or not.

CONTINUOUS ASSESSMENT

- MID-COURSE EXAM:

15% of the final grade.

The first two thematic blocks will be assessed, following the same criterion as the written exam on integration of concepts. The mark obtained will be added to the final grade, regardless of whether it is a pass or not. Passing does not eliminate a subject. Taking the exam will not be considered if the student does not show up for the Concept Integration exam (ordinary call) and will appear in the ordinary call as "Not Presented". The mark obtained is not maintained for the Extraordinary Call.

- DELIVERABLES AND QUESTIONNAIRES FILLED IN DURING CLASSROOM PRACTICE/SEMINARS:

These will consist of responding to questions posed during the performance of the practical session or seminar, either individually or in groups. The following will be assessed in the allocation of the final grade of the subject: accuracy and precision in the answers, writing and graphic expression. The reading/visualization of the themes to be worked on can be requested at any time through the e-Gela platform.

- REPORT ON PRACTICAL LABORATORY WORK:

This must be handed in. To allocate the final grade of the subject, weight will be given to the correct identification and description of the objectives observed in the form of drawings or short answers, using correct scientific language.

<u>WITHDRAWAL FROM CONTINUOUS ASSESSMENT</u>

This only means not taking the Mid-Course Exam. It does not affect attendance and other usual formative activities.

Deadline for presentation: 28 March 2020 at 12:00.

Form: Document available in e-Gela. It must be signed and handed to the coordinator.

Withdrawal means that the Concept Integration Exam (Ordinary Call) represents 90% of the final grade. Not taking the Mid-Course Exam without having presented the withdrawal beforehand will give the Mid-Course Exam a mark of 0 points, maintaining the 15% in the calculation of the final grade.

To arrange a tutorial with the teaching staff, either make contact personally or by email.

Competencies/learning outcomes of the subjects

Competencies	Learning outcomes
1.- Understand microscopic structure and the function of the components of the human body in a state of health. Learn about the principles on which current applied scientific methodology in this discipline is based, and analyze scientific texts, reflecting critically on their content.	✓ Understand microscopic structure and the function of the components of the human body in a state of health. ✓ Relate the structure to the function and its importance in the bases of pathology, integrating this knowledge with that of other biomedical disciplines. ✓ Analyze the principles on which the scientific methodology applied to this discipline is based. ✓ Make a critical analysis and respond to questions or solve problems of a histological basis, using the correct scientific terminology.
2.- Learn about the characteristics and the embryological origin of cellular and tissue components of the organs, systems and tracts. Identify each of their components, both from the theoretical angle and through identification by microscope.	✓ Learn the concept, the classification of the tissue components of the organs, systems and tracts of the human body and their embryological origin. ✓ Learn the characteristics and identify, using the microscope, the cellular and tissular components of the endocrine, respiratory, digestive, urinary, reproductive and integumentary systems of organs, systems and tracts.
3.- List the supratissular and functional activity of organs, tracts and systems, as well the molecular, cellular and physiological bases for their activity. Apply bio-pathological principles that govern lesions to the organs, tracts and systems.	✓ Link knowledge of supratissular organization and the functional activity of organs and systems with the molecular and physiological bases that make this organization possible. ✓ Learn the bio-pathological principles that constitute the basis of illnesses in which alterations occur to the normal structure of organs, tracts and systems.

Assessment system

Assessment Evaluation	% final grade	Learning objective assessed
1.- Written theoretical assessment (2) (one or more specific exams)	Final exercise_____65%	
• 1 Multiple-choice test, only one correct answer, penalty of -0.33 points for each wrong answer. • Minimum grade of 4.75/10 in the assessment required		
2.- Oral and/or practical assessment (one or more specific exams)	Test: recognition of microscope images + identification test of organs in histological preparations____20%	
• Test: recognition of microscope images (minimum grade = 6/10) • Test: identification of organs in microscopic preparations (minimum grade to pass the subject = 6/10)		
3.- Continuous assessment of face-to-face and independent work activities (direct assessment of the training process)	Practical work in class_____10% Portfolio of practical work____5%	
• Assessment of activities in Practical Classwork (10%). A minimum grade of 4/10 is required • Assessment of practical work reports (5%)		

Remarks:

* No additional assessment tests may be taken at any time in the teaching calendar.
* The grade for the practical work will **NOT** be maintained for the extraordinary exam call.

In the case of the **Extraordinary Call** the following will be done: **1. Theoretical written exam** (multiple-choice test) accounting for 80% of the final grade, and **2. Practical assessment** (exam of recognition of histological preparations and images), accounting for 20% of the final grade.

Subject 27273 SPECIAL MEDICAL HISTOLOGY

APPLIED MEDICAL PHARMACOLOGY

1. Description

The main objective of the subject is that the students should acquire the scientific basis to promote individual and collective health through the treatment of the most common illness in our setting.

It is necessary to have passed "Basis of Medical Pharmacology" to take the subject.

2. Learning outcomes

The specific learning outcomes of the subject are:

RA1. Evaluate when the patient needs drug treatment and select the most suitable from those available, weighing up the therapeutic value against the toxicity risk.

RA2. Be able to find the right information to solve a drug therapy problem, as well as critically analyze the bibliography of the sector and apply bioethical principles to drug research.

RA3. Use and prescribe drugs correctly in the most common illnesses.

RA4. Learn about Pharmacovigilance and how to fill in a notification of adverse reaction and collaborate with or receive information from the National Pharmacovigilance System.

RA5. Teamwork

3. Content

Theoretical Content: Lectures

General Applied Pharmacology

T0. Introduction

T1. Principles of Clinical Pharmacology.

T2. Reasoned pharmacotherapy, prescription and regulation.

T3. Applied pharmacokinetics and pharmacodynamics.

T4-5. Studies on the use of medication

T6. Safety of medication.

Special groups

T7. Principles of the use of drugs during pregnancy and the pediatric age.

T8. Principles of the use of drugs in older people.

T9. Principles of the use of drugs in liver and kidney failure.

Reasoned prescription in illnesses

T10. Basic principles for the prescription of antibiotics.

T11. Selection and use of antibiotics in highly prevalent infections.

T12. Selection and use of drugs in respiratory illnesses.

T13. Selection and use of drugs in digestive illnesses.

T14. Selection and use of hormonal contraceptive therapy.

T15. Selection and use of drugs in the treatment of pain.

T16. Selection and use of drugs in inflammatory illnesses and headaches.

T17-18. Selection and use of drugs in metabolic illnesses and cardiovascular risk: Osteoporosis, Diabetes, Dyslipidemias

T19-21. Selection and use of drugs in cardiovascular illnesses. High blood pressure, ischemic cardiopathy and thromboembolism, heart failure.

T22-24. Selection and use of drugs in psychiatric illnesses I: Anxiety, Insomnia, Depression and Psychosis.

T25-26. *Selection and use of drugs in* neurological illnesses I: Parkinson's, Alzheimer's, Epilepsy and Headaches.

Practical content:

Practical work in the classroom

PA1. Prescriptions issued in a reasoned way

PA2. Critical reading

PA3. Adverse reactions and Pharmacovigilance

PA4. Criticisms of advertising

Practical computer work

PO1. Sources of information on medication

Seminars

S1. Ethics of research

S2. Pharmacoepidemiology and Pharmacoeconomics.

S3. Placebo effect

S4. Biological medication

S5-S6. Applied clinical cases

Assessment

The assessment of the subject will be continuous, as described below:

1. Final exam (70% of the final grade). It will consist of 25-30 multiple-choice questions and 3-4 questions to be answered in writing. To pass this part, the student must score at least 4 (out of 10) in each part.
2. Attendance (4% of the final grade).
3. Individual and group practical activities (26% of the final grade). To pass the subject, this part must be passed too.

If a student wishes, he/she may be assessed through the final assessment system (final exam). This must be requested within 9 weeks of starting the term. The theoretical content will be assessed (70% of the grade, written exam) and practical content (30% of the grade, oral exam). Both parts must be passed separately.

Non-attendance at the final exam will mean automatic withdrawal from the call.

The extraordinary call will consist of a single final exam similar to that of the ordinary call.