1. OVERVIEW

Subject Area	PAEDIATRICS
Degree	Bachelor's Degree in Medicine
School/Faculty	Biomedical and Health Sciences
Ac. Year	5
ECTS	12 ECTS
Type	Compulsory
Language(s)	Spanish
Delivery Mode	On campus
Semester	First and second semester (year)

2. INTRODUCTION

This is a compulsory subject belonging to the Human Clinical Training module and is taught during the 5th year. The subject consists of 6 theory-based ECTS and 6 ECTS in clinical placements. To take this course, students must have passed at least 150 ECTS in the first three years.

The overall objectives of the subject area are:

- Provide knowledge of aetiology, symptomatology, diagnostics, prognosis and prevention of paediatric-age diseases.
- Organise the gathering of patient information to draw up a clinical history (anamnesis and physical examination).
- Describe how the main complementary tests are used in paediatrics.
- Learn the steps involved in making a diagnosis, prognosis and treatment plan for the main pathologies in paediatrics.
- Decide on and propose the suitable preventative measures in different clinical paediatric situations.

3. SKILLS AND LEARNING OUTCOMES

General skills (CG, by the acronym in Spanish):

- CG1: Recognise the essential parts of being a medical professional, including ethical principles and legal responsibilities.
- CG2: Understand the importance of such principles to benefit patients, society and the profession, with particular attention paid to professional secrecy, confidentiality and intimacy.
- CG3: Know how to apply the principle of social justice to professional practice.
- CG4: Develop professional practice taking into account patient autonomy, beliefs and culture.
- CG5: Be aware of the need to maintain and update professional skills, paying special attention to continuous self-learning of emerging knowledge and to discover new products and techniques with the aim of improving quality.
- CG6: Carry out professional activity with regard to other health professionals.
- CG8. Recognise the bases of normal human conduct and its alterations.
- CG10: Understand and recognise the causal agents and risk factors which determine health conditions and the development of a disease.
- CG11. Understand and recognise the effects of growth, development and ageing on the individual and the social environment.
- CG12: Understand the principles of action, indications and effectiveness of therapeutic interventions, based on the available scientific evidence.
- CG13: Obtain and elaborate a clinical history report with all relevant information.
- CG14: Perform a physical examination and mental health assessment.
- CG15: Have the ability to carry out an initial diagnosis and establish a well-founded approach to making a diagnosis.
- CG17: Establish the diagnosis, prognosis and treatment, applying the principles based on the most reliable information possible.
- CG18: Indicate the most suitable therapy for the most common acute and chronic processes, including patients in the terminal phase.
- CG19: Raise and propose the suitable preventative measures required for each clinical situation.
- CG20: Acquire sufficient clinical experience under supervision in hospital institutions, health centres or other healthcare institutions.
- CG21: Listen attentively, obtain and synthesise information regarding the problems troubling the patient and understand this information.
- CG22: Write clinical histories and other medical records in a way so they can be understood by other people.
- CG23: Communicate effectively and clearly, both orally and in writing, with patients, family members, media and other professionals.
- CG24: Establish good interpersonal communication which allows you to efficiently and empathetically connect with patients, family members, media and other professionals.
- CG26: Assume a role in the prevention and protection against diseases, injuries or accidents, together with the maintenance and promotion of health, both on an individual and community level.
- CG32- Know how to use information and communication technology in clinical, therapeutic, preventative and research activity.

Basic Skills (CB, as per the Spanish acronym):

- CB2 Students can apply their knowledge to their work professionally and possess the necessary skills, usually demonstrated by forming and defending opinions, as well as resolving problems within their study area.
- CB3 Students have the ability to gather and interpret relevant data (usually within their study area) to form opinions which include reflecting on relevant social, scientific and ethical matters.
- CB4 Students can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.
- CB5 Students have developed the learning skills necessary to undertake further study in a much more independent manner.

Cross-curricular skills (CT, by the acronym in Spanish):

- CT1. Communication: ability to engage in active listening, ask questions and respond in a clear and concise way, as well as to effectively express ideas and concepts. This includes concise and clear written communication.
- CT3: Teamwork: ability to integrate and collaborate actively with other people, areas and/or organisations to reach common goals, evaluate and integrate contributions from the rest of the group members and create a good working environment.
- CT4: Adaptability: ability to detect, interpret and respond to a changing environment. Ability to equip themselves and work effectively in different situations and/or with different groups or individuals. This means adapting to change depending on circumstances or needs. It involves the confidence to take on crucial challenges on a personal or group level, maintaining a good physical and mental health to allow work to be carried out effectively.
- CT6: Problem solving: ability to solve an unclear or complex issue or situation which has no established solution and requires skill to reach a conclusion.
- CT10. Independent learning: the ability to govern your own development by choosing the most effective lines of action, strategies, tools and opportunities to independently learn and apply knowledge to practice.

Specific skills (CE, by the acronym in Spanish):

- CE 3.1.15 Understand the morphofunctional characteristics of a newborn, child and adolescent. Growth. Premature newborn. Recognise, diagnose and direct treatment of the main paediatric pathologies. Child nutrition. Genetic counselling and diagnosis. Cognitive, emotional and psychosocial development in infants and adolescents.
- CE 3.2.1 Know how to do a full anamnesis focused on the patient and with a view to diverse pathologies, interpreting its meaning.
- CE 3.2.2 Know how to perform a physical examination of the systems and apparatus, as well as a psychopathological assessment, being able to interpret the results.
- CE 3.3.3 Know how evaluate adaptations to clinical parameters at different patient ages.
- CE 5.1.1 Complete a student work placement, involving independent clinical rotation and a final skills assessment in health centres, hospitals and other care facilities, which allows students to incorporate professional values, healthcare communication skills, clinical reasoning, clinical management and critical judgement. This also requires students to familiarise themselves with the most common health problems in Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics, Psychiatry and other clinical areas.

Learning outcomes (RA, by the acronym in Spanish):

- Understand the morphofunctional characteristics of a newborn, child and adolescent.
- Understand the normal growth of an infant, child and adolescent.
- Understand the cognitive, emotional and psychosocial development in infants and adolescents.
- Understand the principles of child nutrition.
- Understand the characteristics of a premature child and how to care for them.
- Understand the principles of genetic diagnosis and counselling.
- Recognise the most common paediatric pathologies.

- Diagnose the most common paediatric pathologies: clinical history of the child; examination of a newborn, infant, child and adolescent; indication and interpretation of the main complementary tests in paediatrics.
- Direct the medico-surgical treatment of the most common paediatric pathologies.

The following table shows how the skills developed in the subject area match up with the intended learning outcomes:

Skills	Learning outcomes
CG~~A~~5, CG10, CE 3.1.15	Understand the morphofunctional characteristics of a newborn, child and adolescent. Understand the cognitive, emotional and psychosocial development in infants and adolescents. Understand the principles of child nutrition. Understand the characteristics of a premature child and how to care for them.
CG~~A~~5, CG10, CG11, CE 3.1.15	Understand the normal growth of an infant, child and adolescent.
CG~~A~~5, CG10, CG26, CE 3.1.15	Understand the principles of genetic diagnosis and counselling.
CB5, CG~~A~~5, CG8, CT3, CE 3.1.15	Recognise the most common paediatric pathologies.
CB2, CB3 , CG~~A~~3, CG13, CG14, CG15, CG17, CG20, CG21, CG22, CG23, CG24, CG32, CT3, CT4, CT6, CE 3.2.1, CE 3.2.2, CE-3.3.3, CE 5.1.1.	Diagnose the most common paediatric pathologies: clinical history of the child; examination of a newborn, infant, child and adolescent; indication and interpretation of the main complementary tests in paediatrics.

4. CONTENTS

Topic	Qualification
Topic 1	Introduction to the study of paediatrics.
Topic 2	Nutritional requirements in paediatrics. Feeding the infant, child and adolescent. Nutrition disorders. Malnutrition. Obesity. Anorexia. Bulimia.
Topic 3	Somatometry. Evaluating growth and nutritional state. Detecting pathology in pondostatural development. Growth and study of the main growth disorders.
Topic 4	Differentiation and sexual maturity. Normal and pathological puberty. Intersex conditions.
Topic 5	Prenatal pathology. General concepts. Monogenic diseases. Gene counselling. Prenatal diseases caused by exogenous agents.
Topic 6	Most common chromosome abnormalities. Prevention and treatment of congenital diseases. Neonatal screening.
Topic 7	Concept and characteristics of the newborn. Pre-term newborn. Low weight newborn. Most common metabolic disorders in newborns.
Topic 8	Perinatal asphyxia. Hypoxic ischaemic encephalopathy. Obstetric dramas: Prevention and treatment.

Topic 9	Respiratory pathologies in newborns.
Topic 10	Foetal infections and the newborn.
Topic 11	Neonatal jaundice. Blood disorders in newborns.
Topic 12	The child's rights. Informed consent. Child abuse.
Topic 13	The healthy child. Health and prevention habits. Health examinations. Vaccinations for children. Sudden infant death.
Topic 14	Normal psychomotor development. Intellectual disability. Psychopathology in infancy. ADHD.
Topic 15	Adolescence. Prevention of risky behaviour. Eating disorders.
Topic 16	Accidents and intoxication in children. Prevention and treatment.
Topic 17	Emergency paediatric patient care. Paediatric assessment triangle. Most common serious clinical syndromes in paediatric emergencies.
Topic 18	Seminar. Fever without focus. Fever of unknown origin and recurring fever.
Topic 19	Sepsis in children: Septic shock.
Topic 20	Meningitis and encephalitis.
Topic 21	Exanthematous diseases.
Topic 22	Infections caused by protozoa. Parasitic disease. Other viral infections: Adenovirus, respiratory viruses, enterovirus. Flu (A and B), EBV, CMV
Topic 23	A child's immune system. Congenital immunodeficiency. Acquired immunodeficiency. Infections in immunosuppressed children. AIDS.
Topic 24	Connective tissue disease: Juvenile idiopathic arthritis. Vasculitis: Kawasaki disease.
Topic 25	Seminar. Most common orthopaedic disorders in children. Limping in children. Synovitis. Arthritis. Osteomyelitis.
Topic 26	Pathology of the upper air tract. Difficulty breathing. Croup. Acute laryngotracheobronchitis Epiglottitis. Bacterial tracheitis. Foreign object. Pharyngitis, adenoiditis, otitis, sinusitis.
Topic 27	Pathology of the lower respiratory tract I: Acute bronchiolitis. Acute bronchitis. Whooping cough.
Topic 28	Asthma. Cystic fibrosis.
Topic 29	Pneumonia in children. Tuberculosis in children.
Topic 30	Cardiology examination. Heart failure. Syncope.
Topic 31	Most common heart problems in children.
Topic 32	Infant vomiting. Gastroesophageal reflux. Allergy to cow's milk protein.
Topic 33	Acute diarrhoea. Acute gastroenteritis. Sugar malabsorption. Dehydration.
Topic 34	Chronic diarrhoea. Malabsorption syndrome. Celiac disease.

Topic 35	Acute, chronic and recurring abdominal pain. Acute abdomen. Constipation.
Topic 36	Acute and chronic hepatitis. Pathology
Topic 37	Metabolic diseases:
Topic 38	Diabetes mellitus.
Topic 39	Thyroid pathology. Corticoadrenal pathology.
Topic 40	Bone metabolism disorders. Alterations in phosphocalcic metabolism. Ricketts. The most common bone dysplasias.
Topic 41	Urinary tract infection (UTI). Vesicoureteral reflux. Chronic kidney failure.
Topic 42	Haematuria. Glomerulonephritis. HBP. Chronic kidney failure.
Topic 43	Proteinuria and nephrotic syndrome.
Topic 44	Tubulopathies. Polycystic disease.
Topic 45	Convulsions in children. Epilepsy.
Topic 46	Migraine. Intracranial hypertension. Coma
Topic 47	Neuromuscular pathology.
Topic 48	Anaemia in children. Coagulopathies, thrombotic disorders and angiopathies.
Topic 49	Leukaemias and lymphomas.
Topic 50	Solid tumours. Kidney tumours. CNS tumours. Wilm's tumours. Neuroblastoma.
Topic 51	Most significant surgical malformations in paediatrics. Surgical calendar.

5. TEACHING/LEARNING METHODS

The types of teaching/learning methods are as follows:

- Problem-based learning geared towards clinical reasoning: Presentation of problems, reorganising into small groups, literature analysis, analysis of scientific texts and documents, symposiums and presentations, directed debates, specialised individual and collective tutorials, and reaching a consensus.
- Lectures: Classroom presentations by the professor on basic theory, encouraging debate and student participation.
- Case study method: presentation and discussion of clinical cases in small groups.
- Skills learning in the classroom and simulation environments: Practical work with IT programs, anatomical models, human dissection and standardised patients.
- Experiential learning in supervised clinical placements in the different hospital services: problem-solving in a practical context observing the tutor, being observed by the tutor, or with the tutor's supervision. Students will integrate themselves and participate in the activities performed in the healthcare units. The student activities will be programmed, tutor-assisted and assessed by the tutor.

6. LEARNING ACTIVITIES

The types of learning activities, plus the amount of time spent on each activity, are as follows:

On-campus: Learning activity	Number of hours
Theory/practical learning activities on-campus	64
Directed learning activities	28
Independent working	50
Clinical placements	150
Tutorials	6
Knowledge tests	2
TOTAL	**300**

7. ASSESSMENT

The assessment methods, plus their weighting in the final grade for the subject area, are as follows:

On campus:

	Assessment system	Weighting
THEORY (50%)	Continuous assessment	10%
	Final assessment exam	40%
PRACTICAL PART (50%)	Attitude (rubric)	5%
	Clinical practice (rubric)	20%
	ECOE	25%

8. BIBLIOGRAPHY

The reference work for the follow-up of the subject is:

- Nelson. Textbook of Pediatrics. edition 20, WB Saunders Company
- Cloherty J. Manual of Neonatal care, / edition 8, Lippincott Williams & Wilkins 2017
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