

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

<b>Code</b>	34488
<b>Name</b>	Paediatrics I
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	4.5
<b>Academic year</b>	2023 - 2024

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. Period</b>	<b>year</b>
1204 - Degree in Medicine	Faculty of Medicine and Odontology	5	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1204 - Degree in Medicine	16 - Human clinical training V	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
COLOMER REVUELTA, JULIA	290 - Pediatrics, Obstetrics and Gynaecology
MUÑOZ BONET, JUAN IGNACIO	290 - Pediatrics, Obstetrics and Gynaecology
TORTAJADA GIRBES, MIGUEL	290 - Pediatrics, Obstetrics and Gynaecology

**SUMMARY**

In this subject, a program destined to allow students to recognize the main aspects of health and disease in the childhood is proposed, highlighting the preventive and healing aspects of the pediatric affections. Along with the subject Pediatrics II, from a theoretical-practical perspective, the main health problems that can appear during childhood are approached, and it allows the student to know how to treat them and collaborate with the full development of the child. In this first part, problems related to prenatal pathology, the newborn, growth and pathology of the digestive system and nutrition are reviewed.



## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

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

### Other requirements

To course this subject, it is advisable that the students have passed the modules of Morphology, Structure and Function of the Human Body: Skills in Social Medicine and Diagnostic-Therapeutic Procedures.

## COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

### 1204 - Degree in Medicine

- Obtain and elaborate a clinical history with relevant information.
- Perform a physical examination and a mental health assessment.
- Have the capacity to make an initial diagnosis and establish a reasonable strategy of diagnosis.
- Establish the diagnosis, prognosis and treatment, applying principles based on the best information available and on conditions of clinical safety.
- Indicate the most accurate therapy in acute and chronic processes prevailing, as well as for terminally ill patients.
- Plan and propose appropriate preventive measures for each clinical situation.
- Acquire proper clinical experience in hospitals, health care centres and other health institutions, under supervision, as well as basic knowledge of clinical management focused on the patient and the correct use of tests, medicines and other resources available in the health care system.
- Know how to use the sources of clinical and biomedical information available, and value them critically in order to obtain, organise, interpret and communicate scientific and sanitary information.
- Know how to use IT in clinical, therapeutic and preventive activities, and those of research.
- Understand the importance and the limitations of scientific thinking in the study, prevention and management of diseases.
- Organizar y planificar adecuadamente la carga de trabajo y el tiempo en las actividades profesionales.
- Capacidad para trabajar en equipo y para relacionarse con otras personas del mismo o distinto ámbito profesional.
- Criticism and self-criticism skills.
- Capacity for communicating with professional circles from other domains.



- Acknowledge diversity and multiculturality.
- Consideration of ethics as a fundamental value in the professional practise.
- Working capacity to function in an international context.
- Knows the morphofunctional characteristics of newborns, children and adolescents, as well as the characteristics of growth, and of preterm infants.
- Recognises, diagnoses and guides the management of the main paediatric pathologies.
- Understands the characteristics of child nutrition.
- Recognises, diagnoses, and guides the management of vital risk situations.
- Knows how to perform a complete anamnesis, focused on the patient and orientated to various pathologies, interpreting its meaning.
- Knows how to carry out manoeuvres of basic and advanced life support.

### **LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)**

The student will know how to recognise, diagnose and guide the management in the children and teenagers population:

1. Most frequent chromosomopathies.
2. Embryopathies and fetopathies.
3. Neonatal cyanosis.
4. Neonatal dyspnea.
5. Jaundice.
6. Pre and Perinatal infection.
7. Hypogluccemia.
8. Child diabetes.
9. Nutrition disorders. Dental caries prevention.
10. Lactation. Complementary nutrition.
11. Growth disorders.
12. Acute and chronic abdominal pain.
13. Vomits.
14. Acute diarrhea.



15. Constipation.

The student will know the most relevant aspects of:

1. Newborn and preterm: integral healthcare.
2. Common dysmorphic syndromes: chromosomopathies. Diagnosis and genetic advice. Gene therapies.
3. Intestinal malabsorption syndrome: celiac disease.
4. Pancreas cystic fibrosis.
5. Congenital errors of the metabolism.
6. Hydro-electrolytic metabolism disorders.
7. Normal psychomotor development.
8. Prevention of risk behaviours (tobacco, alcohol, drugs ). Advantages of exercise-sport and healthy diet.
9. Adolescence. Biological, psychological and social aspects.
10. Attention disorders: hyperactivity and inattention. Secondary pathology to the information and communication techniques.
11. Environmental pollution. Prenatal aggression and impact in the child and adult health.

The student will acquire competence in a variable degree in:

1. Pediatric anamnesis.
2. Clinical exploration in the different stages of the childhood (newborn, breastfed, school-age) and of the adolescence.
3. Growth value.
4. First newborn cares after the birth.
5. Child nutrition. Breastfeeding.
6. Planning and calculation of diet regimes.
7. Basic cardiopulmonary reanimation.
8. Healings. First measures in a lesion. Nosebleed. Insolation preventive measures.



9. Evaluation of the hematologic and biochemical parameters in the pediatric age.
10. Vaccine calendar: recommendation and application.
11. Dosage of the main drugs of pediatric use.
12. Evaluation of the skeletal maturation.
13. Hips exploration in children younger than 1 year of age.
14. Enteral and parenteral nutrition.

## DESCRIPTION OF CONTENTS

### 1. THEORY

1. Fundamental concepts in Paediatrics
2. Normal development during childhood.
3. Pre-conception factors of the development. Prenatal Pathology.
4. Newborn. Concept. Anatomical and physiological characteristics of the normal newborn. Prophylaxis practices. The newborn of low weight.
5. Perinatal anoxia. Hypoxic-ischemic encephalopathy. Ventricular and periventricular hemorrhage.
6. Newborn respiratory pathology.
7. Newborn hemorrhage. Obstetric traumatism. Newborn jaundice.
8. Infections in the newborn period.
9. Child nutrition. Energetic aspects. Analysis of the necessities in immediate principles. Reference intakes. Breastfed nutrition: breastfeeding.
10. Artificial breastfeeding. Mixed breastfeeding. Complementary nutrition. Pre-school, school and adolescent nutrition.
11. Nutrition pathology: malnutrition. Obesity.
12. Most frequent specific nutritional disorders (deficit and excess): fat-soluble and hidrosoluble vitamins, zinc. Rickets.
13. Physiology and pathology of the hydro-mineral metabolism. Physiology and pathology of the acidbase metabolism.
14. Hypoglucemias. Diabetes mellitus.
15. Congenital metabolic diseases.
16. Vomit study. Anomalies in the development of the digestive duct.
17. Acute diarrhea. Constipation.
18. Pathology of the intestinal digestion: pancreas cystic fibrosis.  
Pathology of the intestinal absorption: celiac disease.
19. Abdominal pain.



## 2. PRACTICES

### SEMINAR PRACTICES

- Anamnesis, clinical exploration.
- Neuropsychological development.
- Exploration of the Newborn.
- Practical aspects of nutrition.
- Semiology of the digestive system.
- Semiology of the respiratory system.
- Cardiopulmonary reanimation.
- Evaluation of the nutritional condition.

### CLINICAL CASES

- Congenital infection.
- Chromosomopathies.
- Inborn errors of metabolism.
- Newborn of low weight.
- Chronic diarrhea.
- Abdominal pain.
- Feeding difficulties
- Malnutrition.

### CLINICAL PRACTICES

Stay in a hospital for 4 days, in the mornings.

### OTHER PRACTICAL ACTIVITIES

Webinars (pediatric Thursdays), individual online training activities (featured articles, bibliographic news, image of the week, interactive clinical cases and others), clinical skills workshops in the simulation center, service-based learning activities, assistance to courses or congresses... that will be proposed during the course.



## WORKLOAD

ACTIVITY	Hours	% To be attended
Seminars	24,00	100
Theory classes	19,00	100
Clinical practice	13,02	100
Study and independent work	20,00	0
Readings supplementary material	20,00	0
Preparation of evaluation activities	16,25	0
<b>TOTAL</b>	<b>112,27</b>	

## TEACHING METHODOLOGY

The ECTS credits have been arranged according the current laws about the distribution between attending (50%) and non-attending (50%) activities.

- **Theoretical lessons**, the teacher will expose, in a structured way, through master class, assisted with audiovisual means, the most important concepts and contents for obtaining the knowledge and skills that the students must acquire.
- **Clinical cases** aimed at learning skills in the collection of pathological data, their interpretation and diagnostic and therapeutic orientation. Methodologies that encourage student participation will be used.
- **Group seminars**. Based on selected clinical contents that complement those of the theoretical classes. Their essential features are the active participation of the students, with the facilitating action of the teaching staff, and the common written material, as the center of the discussion between participants.
- **Clinical practices**. Stays in the health services in the different university hospitals and primary care centers, in order to learn how to perform an anamnesis and basic clinical explorations, with a first contact with patients, supervised by the professor.
- **Complementary activities** (webinars, clinical skills practices in the simulation center, gamification, commented readings, attendance at courses or congresses...), proposals during the course in order to broaden the students' vision of children's health problems and its overall approach..

Methodologies that encourage participation, collaborative work and learning of pediatrics in terms of diversity.

The gender perspective and the sustainable development goals (SDGs) will be incorporated into teaching, whenever possible.



## EVALUATION

### a) **Theoretical teaching** (50% of the global mark):

- Examination with 40 multiple-answer questions, based on the 19 exposed in the theoretical lessons. Multiplechoice, with 5 possible answers, but only one correct. The right answer will add 1 point and the wrong answer will subtract 0,2 points; blank answers do not have a value.

### b) **Practical teaching** (50% of the global mark):

- Examination of 25 multiple-answer questions, related to the content of the seminars and clinical cases. This represents the 60% of this section. (30% of the global valuation).

- Daily control of attendance at clinical practices and seminars at the corresponding hospital. Attendance to seminars and clinical practices is **mandatory**. Unjustified non-attendance to more than 20% of the sessions will make it impossible to pass the course. The evaluation will be apt or not according to the result of the attendance control and the attitude shown.

- Participation in complementary scoring practical activities proposed during the course. The evaluation will be carried out through the accreditation of attendance and the use established for each one of them. This section accounts for 40% of the practical assessment (20% of the global assessment).

The subject will be passed with a global mark equal to or greater than 5 (out of 10), adding the evaluation of the theoretical teaching and that of the practical teaching and provided that a score equal to or greater than 50% has been obtained in the written exam (4 out of 8 points).

It is a requirement for advanced examination of this subject that the student has completed all practical sessions.

Students are reminded of the importance of carrying out evaluation surveys on all the teaching staff of the degree subjects.

## REFERENCES

### Basic

- Robert M. Kliegman et al. Nelson. Tratado de Pediatría. 21ª ed. Barcelona: Elsevier; 2020.  
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- Recursos-e Salut: ClinicalKey Student. Elsevier (Scopus, ScienceDirect).





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### Additional

- Karen J. Marcadante y Robert M. Kliegman. Nelson pediatria esencial. 8ª ed. Barcelona: Elsevier; 2019.  
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