



## COURSE DATA

### Data Subject

<b>Code</b>	33956
<b>Name</b>	Child Nutrition
<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 year</b>
1205 - Degree in Human Nutrition and Dietetics	Faculty of Pharmacy and Food Sciences	4 First term

### Subject-matter

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1205 - Degree in Human Nutrition and Dietetics	36 - Child nutrition	Optional

### Coordination

<b>Name</b>	<b>Department</b>
CODOÑER FRANCH, PILAR	290 - Pediatrics, Obstetrics and Gynaecology
ROMAN ORTIZ, MARIA ELENA	290 - Pediatrics, Obstetrics and Gynaecology
TORTAJADA GIRBES, MIGUEL	290 - Pediatrics, Obstetrics and Gynaecology

## SUMMARY

This subject has as main objectives:

To acquire basic knowledge of nutrition in different pediatric age (infant, preschool, school and adolescent) health with special attention to how effective prevention of chronic nutritional disorders.

-Know pediatric diseases result in greater nutritional risk.

-Understand the principles and practical management of the pediatric enteral and parenteral nutrition



- Train students in a transversal way in all subjects with the integration of the three dimensions of sustainable development: economic, social and environmental, prioritizing the fight against poverty and hunger, with a strong anchor in the defense of the human rights, gender equality and the empowerment of women, together with the elimination of unsustainable consumption patterns.

## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

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

### Other requirements

Los establecidos en el plan

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

### 1205 - Degree in Human Nutrition and Dietetics

- Understand the physiological, psychological, social and cultural characteristics of childhood.
- Know the needs and nutritional recommendations in childhood.
- Know about the different possibilities of nutrition in infants.
- Assess the level of development and nutritional status in childhood.
- Design diets suited to the nutrition-related diseases of infants.
- Act at the level of nutrition education for the prevention of future nutrition-related diseases.
- Evaluate and design school menus.

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

The results of learning will be the consequence to get the goals exposed in the last item

## DESCRIPTION OF CONTENTS

### 1. Relevance of nutrition in pediatrics. Nutritional disorders. The goals of dietitians

Emphasize the importance of child nutrition in human health in the short and long term. Asking the different nutritional prospects in the world.

Analyze the roles of the dietitian in the health promotion and prevention and treatment of pediatric nutritional diseases



## 2. Fundamentals of human growth and development

Explain the biological characteristics of pediatric patients who justify their specific nutritional requirements. The emphasis is on changes in growth rate and body composition

## 3. Nutritional requirements in infancy and childhood

Include the role of nutrition in children and differences with the adult. It specifies the components of energy expenditure and daily caloric needs. Needs are established in macro and micronutrients by age

## 4. Infant nutrition: breast feeding and formula feeding

It details the advantages of breastfeeding, the composition of breast milk and recommendations for the composition of infant formulas

## 5. Infant nutrition: complementary food

It details the definition and age of introduction of complementary feeding. Schedule is stable incorporation of food

## 6. Nutrition in the preterm infant and nutrition in infant with low birth weight

It specifies the concepts of preterm birth and low birth weight. Nutritional requirements are specified by age. Explains the main nutritional disorders

## 7. Nutrition in childhood

Explains the rationale for establishing the nutritional needs of this age and the main dietary recommendations

## 8. Nutrition in the adolescence. Nutrition y sport. Eating disorders

Explains the rationale for establishing the nutritional needs of this age and the main dietary recommendations. Include the major risk behaviours and the benefits of sport. Explains the main adolescent behaviour disorders, diagnostic criteria, manifestations, prevention and treatment

## 9. Inborn errors of metabolism

These topics explain the general scheme of detection of the major errors of metabolism and general and specific treatment



### **10. Protein-energy malnutrition**

It explains the primary and secondary forms of child malnutrition, etiology, pathophysiology and principles of treatment

### **11. Vitamin, mineral and oligoelement deficiencies**

It explains the major nutritional disorders in the child-specific vitamins, minerals and trace elements. Risk factors, ways of prevention and treatment. It details the calcium-phosphorus metabolism in children, the process of acquisition of bone mineral content and nutritional factors involved

### **12. Water requirements and related pathology**

Explains water metabolism in different pediatric ages, the calculation of water and ions needs and changes in circumstances

### **13. Obesity in children**

Highlight the prevalence of overweight and obesity in our detailing the major risk factors. Clinical and anthropometric assessment. Major comorbidities in children. Principles of prevention and treatment

### **14. Children with diabetes**

It explains the ways of childhood diabetes, clinical presentation and dietary management stressing the importance of ensuring the growth and development

### **15. Nutrition in children with congenital heart defect**

It explains the types of congenital heart disease and nutritional risks of major heart disease. Care arise in water intake and the beginning of nutritional treatment (enteral nutrition and dietary recommendations).

### **16. Cystic fibrosis**

It explains the diagnostic criteria, mechanisms of malnutrition and nutritional treatment (fat-soluble vitamins, dietary recommendations and enteral nutrition) and the use of pancreatic enzyme replacement therapy

### **17. Nutrition in children with nephropathy**

Explains the main nephropathies of children and their nutritional risk. Care arise in water intake and the beginning of nutritional treatment (enteral nutrition and dietary recommendations).



### 18. Nutrition in children with encephalopathy

Explains the main infantile encephalopathy and nutritional risk. Criteria of cerebral palsy. Nutritional care arise: dietary recommendations, food texture modification and enteral nutrition (indications of gastrostomy).

### 19. Nutrition in children with cancer

Explains the main oncological diseases and nutritional risk children. It includes nutritional assessment and dietary recommendations, and the indications and modalities of enteral nutrition

### 20. Rehydration and refeeding in diarrheal disease

This raises the frequency of diarrhea in children and their nutritional implications. It explains the advantages of oral rehydration and early feedback on the whole foods

### 21. Lactose intolerante and milk allergy

Highlight the clinical characteristics of lactose intolerance and cow's milk protein. Know how to prepare diets free of these nutrients

### 22. Feeding in children with celiac disease

Definition and diagnostic criteria of celiac disease. Nutritional monitoring. Development of gluten-free diet in the different pediatric age

### 23. Feeding in children with dislipidemy

Explain the major lipid disorders in children and its consequences. Major dietary recommendations

### 24. Pediatric prevention of nutrition related disorders in later life

It explains the most common chronic disease nutrition: obesity, arteriosclerosis, hypertension, osteoporosis, cancer, etc.. Emphasize the importance of establishing healthy habits in children in the prevention of chronic diseases

### 25. Artificial nutrition support: Concepts, modalities and indications. Parenteral and enteral nutrition

In these 3 topics explain the concept of artificial nutrition, types and indications. Advantages of enteral versus parenteral nutrition. Practical realization of enteral nutrition: tubes, gastrostomy, formulas, and infusion techniques. General approach to parenteral nutrition

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	30,00	100
Computer classroom practice	8,00	100
Seminars	2,00	100
Tutorials	2,00	100
Development of group work	13,50	0
Study and independent work	10,00	0
Readings supplementary material	2,00	0
Preparation of evaluation activities	10,00	0
Preparing lectures	10,00	0
Preparation of practical classes and problem	12,00	0
Resolution of case studies	10,00	0
<b>TOTAL</b>	<b>109,50</b>	

**TEACHING METHODOLOGY**

Lectures

Seminars with clinical cases

Computer room: dietary survey, search of computer resources, etc.

Tutorials

Individual and group work

Incorporating theoretical content updated in the virtual classroom (<http://aulavirtual.uv.es/>).

**EVALUATION****EVALUATION**

a) Carrying out a written test type multiple answer, which guarantees knowledge and understanding of the minimum theoretical content established for the subject (60% of the global assessment).

The exam will consist of 50 test questions with 5 answers of which only 1 is valid. The negatives do not discount. Apt = 25 correct questions





In the second call the exam will consist of 10 short questions (apt = 5 points)

b) Continuous evaluation (30% of the global evaluation) that consists of the elaboration and development of a practical assumption, contacting the teaching staff for follow-up.

c) Evaluation of participation in coordinated seminars (10% of the global evaluation) IMPORTANT!!! THIS SCORE WILL BE ADDED ONCE THE WRITTEN TEST IS PASSED

The attendance at practices and the notes of the continuous evaluation and of the seminars will be kept from one call to another, in the case that the students have not presented themselves to the first call and in that of students who repeat a year.

ATTENDANCE to seminars and tutorials is compulsory.

Final evaluation = exam grade (maximum 6 points) + continuous evaluation grade (maximum 3 points) + seminar grade (maximum 1 point)

Evidence of copying or plagiarism in any of the assessable tasks will result in failure to pass the subject and in appropriate disciplinary action being taken. Please note that, in accordance with article 13. d) of the Statute of the University Student (RD 1791/2010, of 30 December), it is the duty of students to refrain from using or participating in dishonest means in assessment tests, assignments or university official documents.

In the event of fraudulent practices, the “**Action Protocol for fraudulent practices at the University of Valencia**” will be applied (ACGUV 123/2020):

<https://www.uv.es/sgeneral/Protocols/C83sp.pdf>

## REFERENCES

### Basic

- - TRATADO DE NUTRICION (5 TOMOS) (3ª ED). Ángel Gil Hernández 2017. Editorial Médica Panamericana. ISBN: 9788491101956.
- Libro Blanco de la nutrición Infantil en España. Cátedra Ordesa de la Universidad de Zaragoza, AEP, CGCOP y FEN, 2015. Prensas de la Universidad de Zaragoza. ISBN 9788416515240-
- Niños bien alimentados: Menús saludables y nutritivos (Alimentación infantil) - Pedro Frontera Izquierdo, María del Mar Dolores Gimeno Frontera (Eds). 2015. Editorial Síntesis 2015 ISBN: 849077157X ISBN-13: 9788490771570
- Nutrición en Pediatría. Bases para la práctica clínica en niños sanos y enfermos. Débora Setton , Adriana Fernández (Eds). Editorial Médica Panamericana 2014. ISBN: 9789500603102
- Errores en nutrición infantil. Carlos Sierra Salinas (Ed.) 2014. Editorial Ergon ISBN: 978-84-15950-15-8.



**Additional**

- <http://www.programapipo.com>

<http://www.who.int/childgrowth/es/>

<http://www.aesan.msc.es/AESAN/web/nutricion/nutricion.shtml>

<http://www.naos.aesan.msps.es/csym/piramide/>