COURSE DATA

DATA SUBJECT

Code: 33956
Name: Child Nutrition
Cycle: Undergraduate Studies
ECTS Credits: 4.5
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
1205 - Degree in Human Nutrition and Dietetics	Facultat de Farmàcia i Ciències de l'alimentació	4	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1205 - Degree in Human Nutrition and Dietetics	Child nutrition	ELECTIVES

COORDINATION

CODOÑER FRANCH PILAR

TORTAJADA GIRBES MIGUEL

ROMAN ORTIZ MARIA ELENA

SUMMARY

This subject has the following main objectives:

- To acquire basic knowledge about nutrition at different stages of pediatric age (infants, school-age children, and adolescents), with special attention to the prevention of chronic nutritional diseases.

- To understand pediatric scenarios of nutritional risk.

- To understand the nutritional management of pediatric diseases affecting different organs and systems.

- To know the principles and practical management of pediatric enteral and parenteral nutrition.

- To be familiar with the tools and resources for addressing pediatric nutrition in the general population and in special and pathological situations.

- To train students in a cross-cutting manner in all topics with the integration of the three dimensions of comprehensive development: economic, social, and environmental, prioritizing the fight against inequality, the defense of human rights, gender equality, women's empowerment, and the promotion of healthy and sustainable 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

Stablished in the curriculum

COMPETENCES / LEARNING OUTCOMES

1205 - Degree in Human Nutrition and Dietetics

Act at the level of nutrition education for the prevention of future nutrition-related diseases.

Assess the level of development and nutritional status in childhood.

Design diets suited to the nutrition-related diseases of infants.

Evaluate and design school menus.

Know about the different possibilities of nutrition in infants.

Know the needs and nutritional recommendations in childhood.

Understand the physiological, psychological, social and cultural characteristics of childhood.

DESCRIPTION OF CONTENTS

1. **Importance of childhood nutrition. Short- and long-term nutritional disorders. Perspective of childhood nutrition by geographic area. Roles of the dietitian in pediatrics. Nutritional requirements.** Highlight the relevance of childhood nutrition to short- and long-term human health. Present the different nutritional perspectives around the world. Analyze the roles of the dietitian in health promotion and the prevention and treatment of pediatric nutritional diseases. Nutritional requirements at different stages of childhood.
2. **Biological bases of pediatrics: growth and development.** Presentation of the biological characteristics of pediatric ages that justify their specific nutritional requirements. Special

emphasis is placed on changes in growth rate and body composition.

3. **Vitamin and trace element requirements. Specific disorders**. Importance of micronutrients and consequences of specific deficiencies in pediatrics.
4. **Infant feeding: breastfeeding and feeding with adapted infant formulas.** Advantages of breastfeeding, composition of breast milk and recommendations for the composition of infant formulas are detailed.
5. **Infant feeding: complementary feeding.** Definition of complementary feeding and the basis for its inclusion in the infant's diet. Recommended ages for introducing different foods and their introduction schedule.
6. **Feeding preterm and low birth weight newborns.** The concepts of preterm birth and low birth weight are specified. Nutritional needs are defined by age. The main nutritional disorders are explained.
7. **Feeding preschool and school children**. The fundamentals for establishing nutritional needs for these ages and the main dietary recommendations are explained.
   Feeding adolescents. The fundamentals for establishing nutritional needs for these ages and the main dietary recommendations are explained.
8. **Nutrition of the adolescent.** The fundamentals for establishing the nutritional needs of these ages and the main dietary recommendations are explained.
9. **Nutrition in child and adolescent athletes.** Importance and relationship between nutrition and sport. Adaptation of nutritional requirements according to sporting activity. Prevention of specific deficiencies. Promotion of active habits at different stages of the pediatric lifespan.
10. **Eating disorders: anorexia and bulimia.** The main disorders in children and adolescents are explained, along with diagnostic criteria, manifestations, prevention, and treatment.
11. **Water balance and needs.** The role of water in various pathologies. Hydroelectrolyte disorders. Water balance is explained in different pediatric ages, along with the calculation of water and ion requirements and modifications in special circumstances.
12. **Calcium and phosphorus metabolism disorders.** Regulation of calcium and phosphorus balance in children and its importance in musculoskeletal development. Dietary management and tools for adjusting dietary calcium and phosphorus content.
13. **Protein-calorie malnutrition.** The primary and secondary forms of childhood malnutrition, along with their etiology, pathophysiology, and treatment principles, are explained. The main specific nutritional disorders in children related to vitamins, minerals, and trace elements are explained. Risk factors, prevention, and treatment options are discussed. The process of bone mineral acquisition and nutritional factors are detailed.
14. **Childhood Obesity.** Highlights the prevalence of childhood overweight and obesity in our setting, detailing the main risk factors. Clinical and anthropometric assessment. Main comorbidities in the pediatric age group. Principles of prevention and treatment.
15. **Nutrition of the diabetic child.** Explains the forms of childhood diabetes, their clinical presentation, and dietary management, emphasizing the importance of ensuring growth and development.
16. **Inborn errors of metabolism I. Inborn errors of metabolism II.** Explains the general system for detecting the main inborn errors of metabolism and their general, dietary, and specific treatment.
17. **Nutrition in congenital heart disease.** Explains the types of congenital heart disease and the nutritional risks of the main heart diseases. Addresses fluid intake and principles of nutritional treatment (dietary recommendations and enteral nutrition).
18. **Cystic fibrosis.** Diagnostic criteria, mechanisms of malnutrition, and nutritional treatment (fat-soluble vitamins, dietary recommendations, and enteral nutrition) are explained, as well as the use of pancreatic enzyme replacement therapy.
19. **Nutrition in nephropathies.** The main nephropathies in children and their nutritional risks are explained. The principles of the pathogenetic mechanisms of chronic kidney disease and

nutritional treatment are presented.

20. **Nutrition and diet therapy for children with neurological disorders (encephalopathy, ASD, ADHD). Nutrition in children with disabilities.** The main neurological disorders in pediatrics, encephalopathies, autism spectrum disorders, and attention disorders, and their nutritional risks, are explained. Dietary and nutritional management is discussed: dietary recommendations, food texture modification, and enteral nutrition, including feeding indications for severe gastrostomy tubes.
21. **Nutrition in children with cancer.** The main childhood cancers and their nutritional risks are explained. Nutritional assessment and dietary recommendations are included, as well as the indications and modalities of enteral nutrition.
22. **Rehydration and refeeding in acute diarrhea. Probiotics and prebiotics.** The management of this common digestive disorder in childhood and its nutritional consequences are discussed. The advantages of oral rehydration and early refeeding with whole foods are explained. The evidence on the use of prebiotics and probiotics is updated.
23. **Lactose and cow's milk protein intolerance**. The clinical situations and characteristics of lactose and cow's milk protein intolerance are highlighted. The preparation of diets devoid of these nutrients is explained.
24. **Nutrition in children with celiac disease.** Definition of celiac disease and diagnostic criteria. Nutritional monitoring. Preparation of a gluten-free diet at different pediatric ages.
Nutrition for dyslipidemias. Main lipid disorders in children and their consequences. Main dietary recommendations.
25. **Nutrition in dyslipidemia.** Major lipid disorders in children and their consequences. Main dietary recommendations
26. **Prevention of chronic nutritional diseases in adults in childhood.** Most common chronic nutritional diseases: obesity, arteriosclerosis, high blood pressure, osteoporosis, cancer, etc. Importance of establishing healthy habits in childhood for the prevention of chronic diseases.
27. **Food Allergy.** Basis of food allergy mechanisms in childhood, implications and risks for health and development. General and dietary management and principles of prevention and desensitization.
28. **Food protein-induced enterocolitis syndrome. FPIES.** Definition of the disease and risk situations. Tools for prevention and early identification. Dietary management.
29. **Small intestinal bacterial overgrowth syndrome in pediatrics. SIBO.** Definition and risk scenarios in the pediatric population. Tools for early identification. Dietary management and specific treatment.
30. **Artificial nutrition: concept, types, and indications. Special formulas. Dietary supplements.** The concept of artificial nutrition, its types, and indications are explained. Special low- and high-calorie formulas and indications. Dietary supplements in pediatrics, types, and inclusion in special diets.
31. **Enteral and parenteral nutrition**. Advantages of enteral versus parenteral nutrition. Practical implementation of enteral nutrition: tubes, gastrostomy tubes, formulas, and infusion techniques.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Tutorials	2,00
Theory	30,00

Seminar	2,00
Computer classroom practice	8,00
Total hours	**42,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	13,50
Independent study and work	12,00
Preparation of lessons	22,00
Preparation for assessment activities	10,00
Resolution of case studies	10,00
Total hours	**67,50**

TEACHING METHODOLOGY

Theoretical classes

Tutoring. Clinical cases

Seminars

Computer lab: dietary survey, computer resource search, etc.

Individual and group work

Incorporation of updated theoretical content into the virtual classroom (http://aulavirtual.uv.es/).

EVALUATION

a) A multiple-choice written test guaranteeing knowledge and understanding of the minimum theoretical content established for the subject (60% of the overall assessment).

The exam will consist of 50 multiple-choice questions with four answer options, of which only one is valid. No answers are not discounted. Pass = 25 correct answers.

In the second sitting, the exam will consist of 10 short questions (pass = 5 points).

b) Continuous assessment (20% of the overall assessment), which consists of the development and implementation of a practical case, with contacting the teaching staff for follow-up.

c) Assessment of participation in coordinated (20% of the overall assessment).

Attendance at practical sessions and grades from the continuous assessment and seminars will be recorded.

Attendance at practical sessions and grades from continuous assessment and seminars will be retained from one sitting to the next, in the event that students did not attend the first sitting and for students who repeat a year.

Attendance at seminars and tutorials is mandatory.

Final assessment = exam grade (maximum 6 points) + continuous assessment grade (maximum 2 points) + seminar grade (maximum 2 points).

Clear copying or plagiarism of any assignment included in the assessment will result in the inability to pass the course, and students will be subject to the appropriate disciplinary procedures. Please note that, in accordance with Article 13. d) of the University Student Statute (RD 1791/2010, of December 30), it is the student's duty to refrain from using or cooperating in fraudulent procedures in assessment tests, in assignments completed, or in official university documents.

In the event of fraudulent practices, the procedure will be followed as determined by the "Protocol for action against fraudulent practices at the University of Valencia" (ACGUV 123/2020): https://www.uv.es/sgeneral/Protocols/C83sp.pdf

REFERENCES

- 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
- Manual de Nutrición. 1ª edición. Asociación Española de Pediatría. https://www.aeped.es ¿ manual-nutricion-aep-2021
- 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.
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