



Information about the subject

Degree: Bachelor of Science Degree in Human Nutrition and Dietetics

Faculty: Faculty of Medicine and Health Sciences

Code: 1310306 **Name:** Nutrition in the Different Life Stages

Credits: 6,00 **ECTS Year:** 3 **Semester:** 1

Module: Nutritional, Dietetic and Health Sciences Module

Subject Matter: Fundamentals of Nutrition **Type:** Compulsory

Field of knowledge: Health Sciences

Department: Nutrition

Type of learning: Classroom-based learning

Languages in which it is taught: Spanish

Lecturer/-s:

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Module organization

Nutritional, Dietetic and Health Sciences Module

Subject Matter	ECTS	Subject	ECTS	Year/semester
Ethics and professional deontology	6,00	Social Morality. Deontological ethics	6,00	4/1
Dietetics	6,00	Dietetics	6,00	2/2
Fundamentals of Nutrition	18,00	Human Nutrition	6,00	2/1
		Nutrition in the Different Life Stages	6,00	3/1
		Parenteral and Hospital Nutrition	6,00	3/2
Pathology and Therapy	24,00	Dietotherapy	6,00	4/1
		Nutritional Pathology	6,00	3/2
		Pharmacology Applied to Nutrition	6,00	3/1
		Physiopathology	6,00	2/2
Documentation	6,00	Documentation and Research Techniques	6,00	4/1

Recommended knowledge

It is not necessary to have previous knowledge



Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

- R1 Understands and assimilates the concepts included in the course content.
- R2 Shows ability to solve problems related to these contents using different resources.
- R3 Shows ability to work in a laboratory performing correctly the basic operations and observing the corresponding security rules. As well as a correct understanding of the planning, development and purpose of the experience.
- R4 Understands and adequate uses language, as well as correct writing and presentation of data.
- R5 Collaborates with the teacher and colleagues throughout the learning process: Attendance to theoretical, practical or tutoring sessions; teamwork; respect in the treatment; compliance with the rules of organization of the subject for the benefit of all.



Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

BASIC	Weighting			
	1	2	3	4
CB2 Students know how to apply their knowledge to their work or vocation in a professional way and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study.				X

GENERAL	Weighting			
	1	2	3	4
CG07 Students are able to prepare reports and fill in records related to the professional intervention of the Dietician-Nutritionist.				X
CG10 Elaborate, interpret and manage the tables and databases of food composition.				X
CG12 Students know the nutrients, their function in the organism, their bioavailability, the needs and recommendations, and the bases of the energetic and nutritional balance.				X
CG14 Students apply scientific knowledge of physiology, physiopathology, nutrition and feeding to the planning and dietary advice in individuals and collectivities, along the life cycle, both healthy and sick.				X
CG15 Students design and carry out protocols for the evaluation of nutritional status, identifying nutritional risk factors.				X
CG16 Students interpret the nutritional diagnosis, evaluate the nutritional aspects of a clinical history and carry out the dietary action plan.				X
CG17 Students know the structure of food services and hospital food and nutrition units, identifying and developing the functions of the Dietitian-Nutritionist within the multidisciplinary team.			X	
CG18 Students intervene in the organization, management and implementation of the different modalities of hospital food and nutritional support and outpatient dietetic-nutritional treatment.				X



CG26 Students elaborate, control and cooperate in the planning of menus and diets adapted to the characteristics of the collective to which they are destined. X

SPECIFIC	Weighting			
	1	2	3	4
CE06 Students know the bases and foundations of food and human nutrition.				X
CE14 Students interpret and manage the databases and tables of food composition.				X
CE26 Students know the nutrients, their functions and their metabolic use. To know the basis of nutritional balance and its regulation.				X
CE27 Students evaluate and calculate the nutritional requirements in health and disease situations at any stage of the life cycle.				X
CE28 Identify the basis of a healthy diet (sufficient, balanced, varied and adapted).				X
CE29 To participate in the design of total diet studies.				X
CE31 Students plan, carry out and interpret the evaluation of the nutritional status of subjects and/or groups, both healthy (in all physiological situations) and sick.				X
CE33 To identify the dietary and nutritional problems of the patient, as well as the risk factors and inadequate practices.				X
CE34 Elaborate and interpret a dietary history in healthy and sick subjects. Interpreting a medical history. Understand and use the terminology used in health sciences.				X
CE37 Plan, implement and evaluate therapeutic diets for subjects and/or groups.				X
CE38 Students know the hospital organization and the different phases of the food service.				X
CE39 Participate in the multidisciplinary team of a Hospital Nutrition Unit.				X
CE40 Know the different techniques and products of basic and advanced nutritional support.				X
CE41 Develop and implement plans for the dietary and nutritional transition.				X



CE42	Plan and carry out programs of dietetic-nutritional education in healthy and sick subjects				X
CE46	Prescribe the specific treatment, corresponding to the scope of competence of the dietitian-nutritionist.				X



Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R5	5,00%	Evaluation of the use of the practical classes in the classroom, of problems or computers, seminars and tutorials. Through attendance, and participation in the different activities proposed.
R1, R2, R4	65,00%	Written evaluation of the knowledge and skills obtained. The test may consist of a series of open-ended or multiple-choice questions on the theoretical content of the subject and/or practical exercises (problem solving).
R1, R3, R4	15,00%	Assessment of practical laboratory work, or laboratory culinary techniques workshop, through which the competencies acquired must be demonstrated and that they are capable of being used to solve the different situations and problems that arise in a laboratory; this assessment may be carried out by one of the following methods, or a combination of several of them: an individual written test, the individual or group performance of a laboratory experience, the submission of an individual or group report on the work carried out in the laboratory
R3, R5	15,00%	Evaluation of individual or group practices or activities, in which information related to each of the subjects must be sought and structured, and cases or problems resolved. This is done through a system of continuous evaluation throughout the course, which involves the delivery and / or exposure of work, whose objectives and content will be proposed by the teacher.

Observations

A minimum grade of 5 is needed to be able to average in the theoretical part as well as in the laboratory activities that are delivered (practices). Attendance to Laboratory Practices is



mandatory. Those people who have not attended the practices in person and have approved their delivery will not be able to take the practical exam.

A continuous evaluation will be carried out by carrying out activities such as resolution of clinical cases and presentation of work to monitor the knowledge acquired throughout the subject.

MENTION OF DISTINCTION:

In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with Distinction) may be awarded. Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.

Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

- M1 Exposition of contents by the teacher, analysis of competencies, explanation and demonstration of capacities, skills and knowledge in the classroom. The blackboard, the computer and the cannon will be used to display texts, graphics, etc.
- M2 Resolution of practical exercises and case studies, analysis of evaluation procedures and procedural intervention. All this with the support of the teacher. This aspect can be controlled through attendance and active participation in the practical sessions.
- M3 Resolution of practical exercises and case studies, analysis of evaluation procedures and procedural intervention. All this with the support of the teacher. This aspect can be controlled through attendance and active participation in the practical sessions.
- M4 Monographic sessions throughout the course, oriented towards current aspects and applications of the subject.
- M5 Student study: individual preparation of readings, essays, problem solving, seminars, papers, reports, etc. for discussion or delivery in electronic format.



- M7 Personalised attention and in small groups. Period of instruction and/or orientation carried out by a tutor with the aim of reviewing and discussing the materials and topics presented in the classes, seminars, readings, completion of assignments, etc. The attendance of the student and his/her level of gradual development in the knowledge of the subjects will be evaluated.
- M8 A set of tests, written or oral, used in the evaluation of the student.
- M9 Group preparation of readings, essays, problem solving, seminars, papers, reports, etc... for discussion or delivery.



IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Theoretical lessons M1	R1, R2, R4, R5	38,00	1,52
Practice lessons M2	R3, R4, R5	10,00	0,40
Laboratory M3	R3, R4, R5	6,00	0,24
Seminar M4	R4, R5	2,00	0,08
Office Hours M7	R5	2,00	0,08
Evaluation M8	R1, R5	2,00	0,08
TOTAL		60,00	2,40

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
Autonomous work M9	R3, R5	80,00	3,20
Group work M5	R1, R2, R3, R4, R5	10,00	0,40
TOTAL		90,00	3,60



Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
Introduction	<p>Introduction</p> <ul style="list-style-type: none">• Food and nutrition: diet - health relationship• Food and nutrition in the different stages of life <p>Growth and nutrition</p> <ul style="list-style-type: none">• Growth and nutrition• Growth and development in different periods of age childish• Growth assessment.• Nutritional needs in the growth stage.• Effect of deficit and excess of macronutrients and micronutrients on growth.
Nutrition in pregnancy - Breastfeeding	<ul style="list-style-type: none">• Nutrition in preconception and fertility• Nutrition pregnancy.• Nutrition and breastfeeding.
Nutritional needs of the infant	<ul style="list-style-type: none">• Physiological development.• Needs of carbohydrates.• Protein needs• Fat needs• Water needs• Deneeds of vitamins and minerals• Supplements for the infant.



Food during the first year of life

- Periods of infant feeding
- Human milk
- Immunology of the gastrointestinal tract and its relationship with the lactation.
- antiAllergic property of breast milk
- Benefits of breastfeeding.
- Disadvantages of feeding with artificial formula
- Child formulas.
- Foods other than milk used in food of the infant

Child feeding 1-3 years

- Energy needs
- Needs of macronutrients.
- Needs of vitamins and minerals
- Factors of nutritional risk in the child from 1 to 3 years
- Most suitable daily menu for children from 1 to 3 years old.

Nutrition of preschool and school children

- General characteristics of preschool age
- General school age characteristics
- Factors that influence growth.
- General nutritional and dietary goals
- Factors conditioning the child's nutrition.
- Water, energy, macro and micronutrient requirements.
- Requirements for childhood diets
- Complementary recommendations to parents
- General dietary recommendations
- Collective feeding: school canteen and nursery.
- Indications of a healthy diet



Nutrition in adolescence

- Physical growth and psychosocial development in the different stages of adolescence
- Physiology of growth in adolescence
- Physiological changes in adolescents and its repercussion about nutrition.
- Physiology of growth in adolescence
- Physiological changes in adolescents and its repercussion about nutrition.
- Needs of energy and macronutrients during the adolescence.
- Micronutrient needs during adolescence.
- Recommendations for the preparation of the diet.
- Pattern of healthy diet in adolescence
- Nutritional problems in adolescents.

Nutrition in the adult

- Energy needs
- Needs of macronutrients.
- Micronutrient needs
- Physiological changes that condition nutrition5.
- Distribution of diet
- Feeding during the climacteric
- Recommendations for good nutritional status and avoid overweight during menopause

Nutrition in aging

- Physiological changes related to age
- Nutritional recommendations in the elderly.
- Distribution of the energy ration
- Recommendations for healthy diet
- Design and programming of elderly people's diets
- Validation of nutritional risk in the elderly



Temporary organization of learning:

Block of content	Number of sessions	Hours
Introduction	2,00	4,00
Nutrition in pregnancy - Breastfeeding	3,00	6,00
Nutritional needs of the infant	4,00	8,00
Food during the first year of life	4,00	8,00
Child feeding 1-3 years	4,00	8,00
Nutrition of preschool and school children	4,00	8,00
Nutrition in adolescence	3,00	6,00
Nutrition in the adult	4,00	8,00
Nutrition in aging	2,00	4,00



References

- Gil, A. Nutrition Treatise. Volume I, II and III. Ed. Medical Action, 2005.
- Krause. Nutrition and Diet Therapy. 8th ed. Mexico: Interamericana, 1995.
- Bueno M, Sarría A y Pérez González, JM. Nutrition in pediatrics. Tercera edición. Madrid, Ergón, 2007.
- Martínez, JA. Theoretical and Practical Foundations of Nutrition and Dietetics, McGraw-Hill. Madrid, Spain, 2000.
- Soriano del Castillo. J.M ed. (2006). Human Basic Nutrition.
- Gil, A. (2010). Nutrition Treaty. Tomos I, II, III, IV. Buenos Aires. Ed. Editorial Médica. Panamericana.
- **Links, resources and articles of interest**
- Carrascosa A , Fernández JM, Fernández C , Ferrández A , López-Siguero JP , Sánchez E , Sobradillo D, Yeste D. Spanish growth studies 2008. New anthropometric patterns. Endocrinology and Nutrition. 2008. 55 (10):484-506.
- FESNAD. Dietary Reference Intakes (RDA) for the Spanish Population, 2010. Act Diet. 2010; 14(4):196-197.
- Martínez C, Pedrón C. Nutritional status assessment. Consensus. Diagnostic-therapeutic protocols of Gastroenterology, Hepatology and Pediatric Nutrition SEGHPN-AEP. 314-318.
- WHO (World Health Organization). Child growth and physical development.
- Tojo R, Leis R. Crecimiento y desarrollo. In: M. Cruz Tratado de Pediatría, 10th ed. Madrid: Ergon; 2011.
- Tanner J. Growth at adolescence. London: Blackwell scientific publication, 1962
- SEGHPN. Spanish Society of Gastroenterology, Hepatology and Pediatric Nutrition. Nutritional Application. Galeramartinez.
- Robles-Alonso V, Guarner F. Progress in knowledge of the human gut microbiota. Nut.Hosp. 2013; 28(3):553-557.
- Rodríguez JM, et al. The composition of the gut microbiota throughout life, with an emphasis on early life. Microb Ecol Health Dis. 2015 Feb 2; 26:26050
- Sanchis-Chordá J. Intestinal microbiome, diet and obesity: a close relationship. Rev Esp Nutr Hum Diet. 2014; Vol. 18(Suppl. 1):3-44.
- Basulto J. It makes me ball. When they do not eat as we want them to eat. Third edition. Grupo Editorial S.A.U:2014.
- Xavi Cañellas, Sanchis- Chordá J. Healthy children, healthy adults. Editorial platform. 2016
- Xavi Cañellas, Jesús Sanchís, Xavier Aguado and Lucía Redondo. Prebiotic feeding. For a healthy gut microbiota. Editorial platform.2017.
- www.aeped.es
- www.consejodietistasnutricionistas.com
- Academia Española de Nutrición y Dietética: acedemianutriciónydietética.org.



Addendum to the Course Guide of the Subject

Due to the exceptional situation caused by the health crisis of the COVID-19 and taking into account the security measures related to the development of the educational activity in the Higher Education Institution teaching area, the following changes have been made in the guide of the subject to ensure that Students achieve their learning outcomes of the Subject.

Situation 1: Teaching without limited capacity (when the number of enrolled students is lower than the allowed capacity in classroom, according to the security measures taken).

In this case, no changes are made in the guide of the subject.

Situation 2: Teaching with limited capacity (when the number of enrolled students is higher than the allowed capacity in classroom, according to the security measures taken).

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject will be made through a simultaneous teaching method combining onsite teaching in the classroom and synchronous online teaching. Students will be able to attend classes onsite or to attend them online through the telematic tools provided by the university (videoconferences). In any case, students who attend classes onsite and who attend them by videoconference will rotate periodically.

In the particular case of this subject, these videoconferences will be made through:

Microsoft Teams

Kaltura



Situation 3: Confinement due to a new State of Alarm.

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject, as well as the group and personalized tutoring, will be done with the telematic tools provided by the University, through:

Microsoft Teams

Kaltura

Explanation about the practical sessions:



2. System for Assessing the Acquisition of the competences and Assessment System

ONSITE WORK

Regarding the Assessment Tools:

The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus.

The following changes will be made to adapt the subject's assessment to the online teaching.

Course guide		Adaptation	
Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

Comments to the Assessment System: