

1. OVERVIEW

Subject Area	Practical Study IV
Degree	Bachelor's Degree in Human Nutrition and Dietetics
School/Faculty	Biomedical and Health Sciences
Year	4º
ECTS	12 ECTS
Type	Compulsory
Language(s)	Spanish
Delivery Mode	On campus and blended
Semester	Semester 8
Coordinating professor	Dr Ángela Patricia Morales Cerchiaro

2. INTRODUCTION

The objective of this subject area is for students to acquire the knowledge and skills of a dietician/nutritionist in a professional setting within the discipline. Students will learn how to incorporate the professional values and skills typical of clinical, administrative or public health professions, in relation to human nutrition and dietetics.

3. SKILLS AND LEARNING OUTCOMES

Key skills (CB, by the acronym in Spanish):

- 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 or 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.

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

- CG1: Understand the core elements of the work of dietitians and nutritionists, including ethical principles, legal obligations and the exercise of the profession, and apply the principle of social justice to professional practice to demonstrate respect for people, their habits, beliefs and cultures.

- CG2: Carry out professional activity with regard to other health professionals, acquiring teamwork skills.
- CG3: 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 in nutrition and food, with the aim of improving quality.
- CG4: Be aware of the limits of the profession and your skills, identifying when it is necessary to carry out interdisciplinary treatment, or to refer to another professional.
- CG5: Communicate effectively, both spoken and in writing, with individuals, health professionals or industry and the media, knowing how to use information and communication technology, especially that related to nutrition and lifestyle.
- CG7: Be able to write reports and complete records related to the professional activity of dietitians/nutritionists.
- CG13: Understand and assess the relationship between food and nutrition in situations of health and situations of illness.
- CG14: Apply scientific knowledge of physiology, pathophysiology, nutrition and food to dietary planning and advice for individuals and groups of all ages, including both healthy and unwell people.
- CG15: Design and implement protocols for assessing nutritional status, identifying nutritional risk factors.
- CG16: Interpret a nutritional diagnosis, assess the nutritional aspects of a patient's medical record and implement a diet plan.
- G17: Be familiar with the structure of food services and hospital food/nutrition units, identifying and carrying out the functions of a dietitian/nutritionist as part of a multidisciplinary team.
- CG21: Be able to take part in activities that promote health and aim to prevent disorders and diseases related to nutrition and lifestyle, specifically by educating the population about food and nutrition.

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.
- CT2: Leadership: ability to offer ideas, approaches and interpretations through strategies which offer solutions to real-life problems.
- 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.
- CT5: Initiative: ability to undertake difficult or risky actions with resolve.
- 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.
- CT7: Decision making: ability to choose between different options or methods to effectively solve different problems or situations.
- CT8: Planning and organization: ability to set objectives and choose the right means to fulfil them through the efficient use of time and resources.
- CT9: Ability to put knowledge into practice, using the skills acquired in the classroom to mock situations based on real life experiences that occur in the relevant profession.

- 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):

- CE155: Organise and oversee a nutrition consultation.
- CE156: Know how to make a diet plan for different groups: catering establishments, hospitals, schools, nursing homes.
- CE157: Know how a nutrition service works and is managed, including its staff.
- CE158: Provide nutritional and dietary care to patients.
- CE159: Understand and apply the knowledge and skills acquired in the Bachelor's Degree in Human Nutrition and Dietetics.
- CE160: Prepare and defend arguments and solve problems related to working in the food industry.
- CE161: Understand and apply the knowledge and skills acquired in the degree.

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

- RA1: Identify patients at risk of malnutrition through the use of a nutrition screening method.
- RA2: Interpret the clinical data required to assess and determine a diagnosis of patients' nutritional status.
- RA3: Carry out personalised nutritional and dietary intervention.
- RA4: Monitor and control nutritional intervention.
- RA5: Use effective communication with the multidisciplinary team, patients and family members.
- RA6: Use sources of clinical and scientific information to inform clinical practice.
- RA7: Demonstrate ethical conduct and professional responsibility when working in daily practice with regard to the professional team and service users.

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

Skills	Learning outcomes
CB2, CB3, CB4, CG4, CG5, CG7, CG13, CG14, CG15, CG16, CE155, CE158, CE159, CE161, CT1, CT2, CT6, CT7, CT9, CT10	RA1: Identify patients at risk of malnutrition through the use of a nutrition screening method.
CB2, CB3, CB5, CG3, CG5, CG7, CG13, CG14, G16, CG21, CE156, CE158, CE159, CE161, CT2, CT4, CT6, CT7, CT8, CT9, CT10	RA2: Interpret the clinical data required to assess and determine a diagnosis of patients' nutritional status.
CB2, CB3, CB4, CB5, CG2, CG4, CG5, CG13, CG14, CG15, CG17, CG28, CE155, CE156, CE157, CE158, CT1, CT3, CT4, CT5, CT7, CT9, CT10	RA3: Carry out personalised nutritional and dietary intervention. RA4: Monitor and control nutritional intervention.
CB2, CB3, CB4, CG1, CG2, CG5, CG14, CG21, CE156, CE158, CE159, CE161, CT1, CT3, CT4, CT5, CT9, CT10	RA5: Use effective communication aimed at individuals or groups in order to promote healthy eating habits and nutrition education.
CB3, CB4, CB5, CG1, CG2, CG3, CE159, CE161, CT1, CT5, CT6, CT7, CT8, CT9, CT10	RA6: Use sources of clinical and scientific information to inform clinical practice, professional activity in mass catering and the food industry.
CB4, CG1, CG2, CG4, CG5, CG17, CG21, CE158, CE159, CE161, CT1, CT2, CT3, CT4, CT5, CT9, CT10	RA7: Demonstrate ethical conduct and professional responsibility when working in daily practice with regard to the professional team and service users.

4. CONTENTS

Everything related to the nutritional aspects of menus and products, as well as food quality and safety. In addition, for those doing an outpatient internship, dietary/nutritional treatment will be discussed.

4.1 Description of nutritional status assessment for adults and calculating nutritional requirements in the clinic

- Medical record
- Nutrition analysis
- Physical exam
- Anthropometry
- Biochemical and immunological parameters

4.2 Food and nutrition guidance in the clinic

- Setting objectives for nutritional intervention
- Calorie distribution

4.3 Basis of nutrition screening for adults

- Description of nutrition screening methods
- Validation of screening methods
- Studies of common characteristics

5. TEACHING/LEARNING METHODS

The types of teaching/learning methods are as follows:

- Collaborative learning
- Problem-based learning
- Simulated environments

6. LEARNING ACTIVITIES

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

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On-campus and blended learning:

Learning activity	Number of hours
Independent working	63
Report writing	74
Internships	144
Practice in simulated environments	3
Tutorials	24
TOTAL	300

7. ASSESSMENT

The assessment methods, together with their respective weighting towards the final grade for the subject, are as follows:

A pre-test must be taken and passed (PASS) before the student can begin their work placement at the assigned place of work, in accordance with the external work placement regulations for the Degree in Human Nutrition and Dietetics.

Blended:

Assessment method	Weighting
Activity 1. Tutor's report on work experience	40%
Activity 2. Student's work experience report	30%
Activity 3. Reflective journal	30%

On the Virtual Campus, when you open the subject area, you can see all the details of your assessment activities, including the deadlines and assessment procedures for each activity.

Remember to check the student work placement guide where you will find the regulations regarding external curricular placements (requirements, rules, consequences of infringing them, etc.).

8. BIBLIOGRAPHY

- White JV, Guenter P, Jensen G, Malone A, Schofield M; Academy Malnutrition Work Group; A.S.P.E.N. Malnutrition Task Force; A.S.P.E.N. Board of Directors. Consensus statement: Academy of Nutrition and Dietetics and American Society for Parenteral and Enteral Nutrition: characteristics recommended for the identification and documentation of adult malnutrition (undernutrition). JPEN J Parenter Enteral Nutr. 2012 May;36(3):275-83. doi: 10.1177/0148607112440285.
- Mueller C, Compher C, Ellen DM; American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) Board of Directors. A.S.P.E.N. clinical guidelines: Nutrition screening, assessment, and intervention in adults. JPEN J Parenter Enteral Nutr. 2011 Jan;35(1):16-24. doi: 10.1177/0148607110389335.
- Cederholm T, Bosaeus I, Barazzoni R, Bauer J, Van Gossum A, Klek S, Muscaritoli M, Nyulasi I, Ockenga J, Schneider SM, de van der Schueren MA, Singer P. Diagnostic criteria for malnutrition - An ESPEN Consensus Statement. Clin Nutr. 2015 Jun;34(3):335-40. doi: 10.1016/j.clnu.2015.03.001. Epub 2015 Mar 9.
- Jensen GL, Cederholm T, Correia MITD, Gonzalez MC, Fukushima R, Higashiguchi T, de Baptista GA, Barazzoni R, Blaauw R, Coats AJS, Crivelli A, Evans DC, Gramlich L, Fuchs-Tarlovsky V, Keller H, Llido L, Malone A, Mogensen KM, Morley JE, Muscaritoli M, Nyulasi I, Pirlich M, Pisprasert V, de van der Schueren M, Siltharm S, Singer P, Tappenden KA, Velasco N, Waitzberg DL, Yamwong P, Yu J,

- Compher C, Van Gossum A. GLIM Criteria for the Diagnosis of Malnutrition: A Consensus Report From the Global Clinical Nutrition Community. *JPEN J Parenter Enteral Nutr.* 2019 Jan;43(1):32-40. doi: 10.1002/jpen.1440.
- Gil A, Gil Campos M, Maldonado Lozano J, Martínez de Victoria Muñoz E. Tratado de nutrición. Tomo 5, capítulos 25-30. Madrid: Médica Panamericana; 2017.
 - Jensen GL, Mirtallo J, Compher C, Dhaliwal R, Forbes A, Grijalba RF et al. Adult starvation and disease-related malnutrition: a proposal for etiology-based diagnosis in the clinical practice setting from the International Consensus Guideline Committee. *Clin Nutr* 2010; 29 (2): 151-3
 - Waitzberg, D. L., Ravacci, G. R., & Raslan, M.. (2011). Desnutrición hospitalaria. *Nutrición Hospitalaria*, 26(2), 254-264. Recuperado en 07 de julio de 2022, de http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S0212-16112011000200003&lng=es&tlng=es.
 - Lobatón, E. (2020). Malnutrición hospitalaria: etiología y criterios para su diagnóstico y clasificación. *Revista De Nutrición Clínica Y Metabolismo*, 3(1), 121–127. <https://doi.org/10.35454/rncm.v3n1.019>
 - Solano Pérez, Luisa Andrea; Cuadrado Vives, Carmen; Beltrán de Miguel, Beatriz. Limitaciones de interpretación de la terminología utilizada en el abordaje dietético de las dietas de textura modificada. *Nutr. clín. diet. hosp.* 2017; 37(2):89-97 DOI: 10.12873/372cuadrado
 - García-Peris P, Velasco C, Frías L. Papel del equipo nutricional en el abordaje de la disfagia. *Nutr Hosp* 2014;29(Supl.2):13-21
 - Dietitians Association of Australia and the Speech Pathology Association of Australia Limited. Texture-modified foods and thickened fluids as used for individuals with dysphagia: Australian standardized labels and definitions. *Nutrition and Dietetics* 2007;64 (suppl.2):S53-S76.
 - International Dysphagia Diet Standardisation Initiative. Septiembre 2015. <http://www.iddsi.org>.
 - Velasco C, García- Peris P. Tecnología de alimentos en los alimentos de textura modificada; del triturado o del deshidratado a los productos actuales. *Nutr Hosp* 2014;29(3):465-469.
 - Gabriela Lobo Támer, M.D.. María Dolores Ruiz López, A.J.. Antonio Jesús Pérez de la Cruz. Desnutrición hospitalaria: relación con la estancia media y la tasa de reingresos prematuros. DOI: 10.1016/j.medcli.2008.06.008
 - Zugasti-Murillo, Ana, Estrella Petrina-Jáuregui, María, Ripa-Ciáurriz, Carmen, Sánchez-Sánchez, Rebeca, Villazón-González, Francisco, González-Díaz Faes, Ángela, Fernández-López, Carmen, Calles- Romero, Laura, Martín-Palmero, Ángela, Riestra-Fernández, María, Dublang-Irazabal, Maddalen, Rengel-Jiménez, Josefa, Díez-Muñiz-Alique, Margarita, Agorreta-Ruiz, José Javier, Salsamendi-Pérez, José Luis, Larrañaga-Unanue, Ihintza, Abínzano-Guillén, María Luisa, Olariaga, Olatz, & Cruz, Juan José de la. (2021). SeDREno study - Prevalence of hospital malnutrition according to GLIM criteria, ten years after the PREDyCES study. *Nutrición Hospitalaria*, 38(5), 1016-1025. Epub 24 de enero de 2022.<https://dx.doi.org/10.20960/nh.03638>
 - París AS, García JM, Gómez-Candela C, Burgos R, Martín Á, Matía P, et al. Malnutrition prevalence in hospitalized elderly diabetic patients. *Nutr Hosp* 2013;28(3):592-9Álvarez-Hernández J, Planas Vila M, León-Sanz M, García de Lorenzo A, Celaya-Pérez S, García-Lorda P, et al. Prevalencia y costes de la malnutrición en pacientes hospitalizados; estudio PREDyCES®. *Nutr Hosp* [Internet] 2012 [cited 2021 Jan 30];27(4):1049-59. Available from: http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S0212-16112012000400012&lng=es&nrm=iso&tlng=en
 - Burgos R, Joaquín C, Blay C, Vaqué C. Disease-related malnutrition in hospitalized chronic patients with complex needs. *Clin Nutr* [Internet] 2020 [cited 2021 Feb 2];39(5):1447-53. Available from: <https://pubmed.ncbi.nlm.nih.gov/31256806/>. DOI: 10.1016/j.clnu.2019.06.006

- Torres Torres B, Ballesteros-Pomar MD, García Calvo S, Castro Lozano MÁ, de la Fuente Salvador B, Izaola Jáuregui O, et al. Repercusiones clínicas y económicas de la desnutrición relacionada con la enfermedad en un servicio quirúrgico. *Nutr Hosp* [Internet] 2018 [cited 2021 Feb 2];35(2):384-91. Available from: <https://pubmed.ncbi.nlm.nih.gov/29756973/>. DOI: 10.20960/nh.1315
- Martínez Roldán, C., Veiga Herreros, P., Cobo Sanz, J. M^a, & Carbajal Azcona, A.. (2011). Evaluación del estado nutricional de un grupo de adultos mayores de 50 años mediante parámetros dietéticos y de composición corporal. *Nutrición Hospitalaria*, 26(5), 1081-1090. Recuperado en 07 de julio de 2022, de http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S0212-16112011000500024&lng=es&tlng=es.
- María Alicia Camina-Martínez, Beatriz de Mateo-Sillerasa, Vincenzo Malafarinab,, Rosa Lopez- Mongilc, Virtudes Niño-Martínd, José Antonio López-Trigoe, María Paz Redondo-del-Ríoa, Grupo de Nutrición de la Sociedad Española de Geriatria y Gerontología (SEGG). aloración del estado nutricional en Geriatria: declaración de consenso del Grupo de Nutrición de la Sociedad Española de Geriatria y Gerontología. DOI: 10.1016/j.regg.2015.07.007
- Consenso Multidisciplinar sobre el Abordaje de la Desnutrición Hospitalaria en España. Sociedad Española de Nutrición Parenteral y Enteral.SENPE. <https://www.sennutricion.org/es/2011/09/27/consenso-multidisciplinar-sobre-el-abordaje-de-la-desnutricin-hospitalaria-en-espaa>
- Alianza Masnutridos. <https://www.alianzamasnutridos.es/herramientas/>
- Arhip L, Cambor M, Bretón I, Motilla M, Serrano-Moreno C, Frías L, Velasco C, Carrascal ML, Morales Á, Cuerda C. Social and economic costs of home parenteral nutrition. *Clin Nutr ESPEN*. 2020 Dec; 40:103-109. doi: 10.1016/j.clnesp.2020.10.010. Epub 2020 Oct 28. PMID: 33183521.
- L.Arhip, P. García-Peris, R.M. Romero, L. Frías, I. Breton, M. Cambor, M. Motilla, C. Velasco, A. Morales, M.L. Carrascal, A. Herranz, M. Sanjurjo, C. Cuerda. Direct costs of a home parenteral nutrition programme.
- Miguélez, M., Velasco, C., Cambor, M., Cedeño, J., Serrano, C., Bretón, I., Arhip, L., Motilla, M., Carrascal, M. L., Morales, A., Brox, N., & Cuerda, C. Nutritional management and clinical outcome of critically ill patients with COVID-19: A retrospective study in a tertiary hospital. *Clinical nutrition* (Edinburgh, Scotland), S0261-5614(21)00499-4. Advance online publication. <https://doi.org/10.1016/j.clnu.2021.10.020>
- Pérez Farinós N. et al. Epidemiología básica. Material docente para prácticas en Ciencias de la Salud. 2018. (ISBN: 978-84-685-2400-9)
- García Peris P, Morales Cerchiaro AP. Patología gastrointestinal en ancianos en “El libro Blanco de la Nutrición de las personas mayores en España” FEN. Lesinger S.L.Madrid 2019.ISBN 978-84- 913395- 6.