NUTRITIONAL STATUS INDICATORS IN THE DIETITIAN-NUTRITIONIST CONSULTATION

Degree in Human Nutrition and Dietetics

Course 2026—2027

Code: 804009
Module: 7
Materia: complementary formative
Subject: Optional
Directed to: students of 3rd and 4th grade
Departament: Nutrition and Food Science
Credits: 3 ECTS
Teaching period: first quarter
Start date: September 7th
Schedule: September 7, 9, 11, 14, and 16, from 11:30 a.m. to 2:30 p.m.
September 21, from 9:00 a.m. to 12:00 p.m.
September 23, from 9:00 a.m. to 12:00 p.m.
September 28, from 12:30 p.m. to 2:30 p.m.
September 30, from 9:00 a.m. to 11:30 a.m.
Place: Faculty of Medicine
Number of students: 40

TEACHING STAFF

Coordinador: Aránzazu Aparicio Vizuete
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Professors: Aránzazu Aparicio Vizuete

SHORT DESCRIPTION

The course on Nutritional Status Indicators in nutritional consultation aims to provide dietitians-nutritionists with the knowledge and tools to identify and interpret the main hematological and biochemical parameters, as well as body composition to determine and evaluate the nutritional status of an individual or a group in the consultation.

COMPETENCIES

General competencies

From CG.1.1 to CG 1.4, CG 2.2, CG2.3, CG4.1, CG4.2, CG4.4, CG 4.5, CG 8.1

Specific competencies

From CE.M 4.1 to 4.12, CE.M 4.17, CME 4.22, CME 4.23
From CE.M7.1 to CE.M7.5

OBJECTIVES

- To know and identify nutritional deviations by excess or defect.
- Select, determine and interpret the main biochemical data for the diagnosis of the nutritional situation in subjects and/or population groups.
- Identify the different factors to be taken into account when interpreting the results of the evaluated parameters.

PROGRAM

THEORETICAL PROGRAM

- Theme 1. Introduction to the biochemical study of nutritional status. Samples. Factors to take into account when interpreting the results. Identification of important changes in biochemical parameters after a nutritional intervention.
- Theme 2. Hematological and immunological parameters indicators of nutritional status. Interpretation of these indicators.
- Theme 3. Biochemical parameters indicators of nutritional status in proteins. Interpretation of these indicators.
- Theme 4. Biochemical parameters indicators of the nutritional status in lipids and carbohydrates. Interpretation of these indicators.
- Theme 5. Biochemical parameters indicators of nutritional status in micronutrients. Interpretation of these indicators.
- Theme 6. Urinary parameters indicators of nutritional status. Interpretation of these indicators.
- Theme 7. Biochemical parameters indicators of the nutritional status in fat-soluble vitamins. Interpretation of these indicators.
- Theme 8. Bone parameters related to nutritional status. Interpretation of these indicators.
- Theme 9. Other parameters to consider in the interpretation of the nutritional status. Theme 10. Study of body composition. Techniques and most useful parameters. Interpretation of these indicators.

PRACTICAL PROGRAM

- Assessment of body composition using single- and multifrequency bioimpedance techniques. Bioelectrical impedance vector analysis in nutritional assessment (BIVA).

SEMINARS

- Resolution of clinical cases.

TEACHING METHODS

- Theoretical classes

The theoretical classes will consist of **lectures** in which the student will be introduced to the fundamental contents of the subject. During the exposition of contents, questions or problems will be proposed to exemplify the concepts developed or to serve as an introduction to new contents. To facilitate the work of monitoring by the student of the lectures, the necessary teaching material will be provided through the Virtual Campus of the subject.

- Practical classes and seminars:

The practical classes will be oriented to the realization, on the part of the student, of practical activities that suppose the application of the theoretical knowledge acquired.

In the seminars, several practical cases will be analyzed in which the contents developed in the lectures will be put into practice. The process of solving these problems will be carried out by means of different methods: in some cases, the student will be proposed the exposition in class of the resolution of some of these problems, discussing the procedure followed, the result obtained and its meaning. In other cases, the results of the students will be discussed in small groups and, later, they will be shared.

- Tutorials:

The student has at his disposal tutorials to solve any doubts that may arise during the study. These tutorials will be held in person at the times indicated by each professor and, exceptionally, virtually.

ASSESSMENT OF LEARNING

The assimilation of theoretical knowledge will be assessed based on written tests whose mark will correspond to 65% of the final mark. It will be necessary in any case to achieve at least a mark of 5 out of 10 in this test.

The mark obtained in the evaluation of practical skills will account for 15% of the final mark and it will be mandatory to pass the practical part of the course to pass the subject (grade of 5 or over out of 10).

The continuous evaluation of learning, in which the attitude and participation of the student in classes, tutorials, exhibitions, debates, etc., will correspond to 20% of the final mark.

Attitude to follow in case of a voluntary or accidental infraction in the rules of the exam.

The voluntary or accidental infraction of the rules of the exam will prevent the evaluation of the same, so the offending student will take an oral exam of the subject to establish their knowledge of the subject. If intentionality in the cheating is confirmed, it will be considered very serious misconduct and will be brought to the attention of the Services Inspectorate to take thedisciplinary measures it deems appropriate.

BASIC BIBLIOGRAPHY

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- Brody, T. (1994), Nutritional Biochemistry, Academic Press, Inc., San Diego.
- Fischbach, F.T. (1997), Manual de Pruebas diagnósticas, McGraw-Hill Interamericana, México.
- Gutiérrez, A. (2014), Interpretación clínica del laboratorio. 8ª ed., Editorial Médica Panamericana.
- Raymond, J.; Morrow K. (2025), Krause Dietoterapia, 16ª ed., Editorial Elsevier- España, S.A.
- Matarese, L.E.; Gottschlich, M.M. (2004), Nutrición clínica práctica, Editorial Elsevier, Madrid.
- Morgan, S.l.; Weinsier, R.L. (2000), Nutrición Clínica, 2ª ed., Hartcour-Mosby, Madrid.
- Ortega, R.M. (2022), Nutrición Clínica y Salud Nutricional. Editorial Médica Panamericana, S.A.
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- Ruíz, G.; Ruíz, A. (2017), Fundamentos de interpretación clínica de los exámenes de laboratorio. 3ª ed., Editorial Médica Panamericana.
- Salas-Salvadó, J. (2025), Nutrición y dietética clínica, 5ª ed., Elsevier España.