

69022 - Exploration of the nutritional state

Información del Plan Docente

Academic Year	2017/18
Faculty / School	104 - Facultad de Medicina
Degree	461 - Master's in Genetic, nutritional and environmental growth and development conditions
ECTS	3.0
Year	1
Semester	Annual
Subject Type	Compulsory
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

This course has no face-to-face sessions, it is done via the virtual platform Moodle. The course contents include original works and/or explanatory presentations.

Although the students have access to the materials on the platform, teachers will be available for queries and doubts via email, messages and chats. Before raising any issue/question it is essential to do a thorough and comprehensive reading

69022 - Exploration of the nutritional state

of the available contents.

5.2. Learning tasks

In order to acquire the competences related to this course, students should review autonomously the concepts and content posted on the virtual platform.

Subsequently, to acquire practical skills and the "know-how" competence, students will prepare a research project supervised by the teacher in which they will show the acquired skills and methodologies reviewed during the course. This project will consider, based on a hypothesis, the research methodology needed to develop its objectives, always related to the course contents. Project guidelines will be available on the virtual platform.

5.3. Syllabus

The course will address the following topics:

- Topic 1. Growth and development. Energy balance.
- Topic 2. Standards population anthropometric, body composition, growth and maturation.
- Topic 3. Types of nutritional studies and scientific methodology.
- Topic 4. Models, components and distribution of body composition.
- Topic 5. Physical anthropology and their indexes.
- Topic 6. Bioelectrical impedance techniques.
- Topic 7. Methods for the analysis accuracy of body composition:
 - o densitometric and plethysmographic techniques. BOD POD®;
 - o Dual X-ray absorptiometry
- Topic 8. Quantification of energy expenditure in children and adolescents. Components and determinants.
- Topic 9. Dietary surveys and questionnaires on eating habits and physical activity.
- Topic 10. Development of a research project related to the exploration of nutritional status.

5.4. Course planning and calendar

This course takes place during the months of March-April of the academic year.

Submission dates of the project will be informed at the beginning of the course through a message / announcement of the teacher.

5.5. Bibliography and recommended resources

1. Battistini NC, Malavolti M, Poli M, Pietrobelli A. Growth: healthy status and active food model in pediatrics. *Int J Obes (London)* 2005 Sep;29 Suppl 2:S14-8.
2. Heymsfield SB, Lohman TG, Wang ZM, Going SB. Human body composition. 2ª ed. Champaign, Ill. Human Kinetics, 2005.
3. Heymsfield SB. Composición del cuerpo humano 2ªed (castellano). Mexico DF, McGraw-Hill / Interamericana, 2007.
4. Ayerza A, Rodríguez G, Samper MP, Fuertes J, Broto P, Collado MP, Sebastián MF, Solanas AB, Pardos C. Differences between reference charts of weight in children up to the age of 18 months. *Nutr Hosp* 2010; 25: 838-844.
5. Lee RD, Nieman DO. Nutritional Assessment. 4ª ed. Europe, McGraw-Hill Education, 2006.
6. Oves B, Samper MP, Escartín L, Álvarez ML, Moreno LA, Labayen I, Rodríguez G. Tendencia secular del crecimiento durante la primera infancia en el norte de España. Growth secular trend during early childhood in Northern Spain. *Nutr Hosp* 2013; 28: 1985-1992.
7. Moreno LA, Rodríguez G, Garagorri J. Metabolismo energético. Requerimientos. En: Bueno M, Sarría A, Pérez-González JM, eds. *Nutrición en Pediatría (3ª Ed.)*. Madrid: Ergón, 2007; 43-48.
8. Rodríguez G, Vicente-Rodríguez G, Rey JP, Moreno LA. Actividad física y composición corporal. En: Redondo C, González M, Moreno L, García M, eds. *Actividad física, deporte, ejercicio y salud en niños y adolescentes*.

69022 - Exploration of the nutritional state

- Asociación Española de Pediatría, 2010: p. 135-143.
- 9. Rodríguez G, Moreno LA. Body mass index and body fat composition in children and adolescents. En: Linda A. Ferrera, ed. Focus on Body Mass Index and Health Research. Nueva York: Nova Science Publishers, 2006; 79-95.
 - 10. Sarría A, Bueno M, Rodríguez G. Exploración del estado nutricional. En: Bueno M, Sarría A, Pérez-González JM, eds. Nutrición en Pediatría (3ª Ed.). Madrid: Ergón, 2007; 27-41.
 - 11. Moreno LA, Rodríguez G. Valoración del estado nutricional. En: Moro M, Málaga S, Madero L, eds. Tratado de Pediatría Cruz (11ª ed). Madrid: Panamericana, 2014: 1031-1038.
 - 12. RodríguezG, Pietrobelli A, Wang Y, Moreno LA. Methodological aspects for childhood and adolescence obesity epidemiology. En: Moreno LA, Pigeot I, Ahrenseds W, eds. Epidemiology of Obesity in Children and Adolescents. Springer, 2011; p. 21-40.
 - 13. Storm J. Laboratory assessment of nutritional status. Rolling Hills California, Academy Medical Systems, Inc. 2005.
 - 14. Wang ZM, Pierson RN Jr, Heymsfield SE. The five-level model: a new approach to organizing body-composition research. Am J Clin Nutr 1992; 56: 19-28.
 - 15. Williams JE, Wells JC, Wilson CM, Haroun D, Lucas A, Tewtrell MS. Evaluation of Lunar Prodigy dual-energy X-ray absorptiometry for assessing body composition in healthy persons and patients by comparison with the criterion 4-component model. Am J Clin Nutr 2006 May;83:1047-54.