

29218 - Sport: Nutrition and Food

Información del Plan Docente

Academic Year	2017/18
Faculty / School	229 - Facultad de Ciencias de la Salud y del Deporte
Degree	441 - Degree in Human Nutrition and Dietetics
ECTS	6.0
Year	3
Semester	First semester
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

The methodology followed in this course is oriented towards the achievement of the learning objectives. Teaching and learning tasks are implemented, such as participative lectures, practical lessons, student's autonomous work and evaluation activities. Group and individual tutorials are available.

5.2.Learning tasks

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The course includes 6 ECTS organized according to:

- Participative lectures (40 h)
- Seminars (8 h)
- Laboratory practical lessons (9 h)

See Syllabus for further details.

5.3.Syllabus

Theoretical program

Part I: General aspects

- Introduction to sports nutrition
- Skeletal muscle fibers: constitution and properties. Skeletal muscle contraction
- Skeletal muscle metabolism during exercise. Functional classification of exercise according to substrate utilization

Part II: Physiological adaptations to physical activity

- Cardiovascular, respiratory and blood adaptations during exercise
- Renal adaptations, hydromineral and acid-base balance during exercise
- Effects of exercise in the gastrointestinal functions
- Thermoregulation and neuroendocrine adaptations during exercise

Part III: Nutritional needs of athletes

- Nutritional needs of athletes: energetic macronutrients and fiber. Water and electrolytes. Vitamins, minerals, micro and oligoelements
- Nutritional Status Assessment in Athletes
- Measurement of energy expenditure in athletes
- Diet planning for athletes

Part IV. Complementary aspects

- Fatigue and ergogenic aids
- Physical activity for health
- Eating disorders in athletes

Practical program

- Cardiovascular adaptations to physical activity and their applications to sports nutrition.
- Variation in glycemia during physical activity and its application to sports nutrition.
- Analysis and/or elaboration of sport drinks.
- Anthropometric evaluations and somatotype.
- Team sports diet planning: training diet.
- Half-marathon diet planning: diet. Pre and post competition menu. Hydration and nutrition during the event.

5.4.Course planning and calendar

Timetables will be available via Moodle at the beginning of the semester.

5.5.Bibliography and recommended resources

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- BB** Barbany Cairó, Joan Ramón. Fisiología del ejercicio físico y el entrenamiento / J. R. Barbany . - 2a. ed., 1a. reimp. Barcelona : Paidotribo, cop. 2009
- BB** Barbany, Joan Ramon. : Alimentación para el deporte y la salud / Joan Ramón Barbany ; con la colaboración de Antonia Lizárraga y Raúll Bescós. Badalona : Paidotribo, 2012.
- BB** Burke, Louise : Nutrición en el deporte : un enfoque práctico / Louise Burke Madrid : Editorial Médica Panamericana, cop. 2010
- BB** González Gallego, Javier.. Nutrición en el deporte : ayudas ergogénicas y dopaje / Javier González Gallego, Pilar Sánchez Collado, José Mataix Verdú. . Madrid : Díaz de Santos : Fundación Universitaria Iberoamericana, D.L.2006.
- BB** Nutrición y dietética para la actividad física y el deporte / Víctor Manuel Rodríguez Rivera, Aritz Urdampilleta Otegui, coord. La Coruña : Netbiblo, 2014.
- BC** Costanzo, Linda S.. Fisiología / Linda S. Costanzo ; [revisión científica, Xavier Gassull] . 4ª ed. Ámsterdam ; Barcelona ; Madrid [etc.] : Elsevier, D.L. 2011
- BC** Hall, John E. : Tratado de fisiología médica [13ª ed.] / John E. Hall ; [revisión científica, Xavier Gasull Casanova]. - 13ª ed. Barcelona : Elsevier España, D.L. 2016
- BC** Williams, Melvin H.. Nutrición : para la salud, la condición física y el deporte/ edited by Melvin H. Williams ; traducción, Celia Pedroza Soberanis, Gabriela León Jiménez . 7ª ed. Mexico : McGraw-Hill Interamericana 2005