

26338 - Nutrition and Physical Activity

Syllabus Information

Academic year: 2024/25

Subject: 26338 - Nutrition and Physical Activity

Faculty / School: 229 - Facultad de Ciencias de la Salud y del Deporte

Degree: 295 - Degree in Physical Activity and Sports Science

ECTS: 6.0

Year:

Semester: First semester

Subject type: Optional

Module:

1. General information

The subject and its expected results respond to the following approaches and objectives:

- To know the fundamental concepts of nutrition and food.
- To relate nutritional aspects to different levels of physical activity and sports demands.
- To manage different tools to know the nutritional status of an athlete.
- To calculate pre-, during and post-exercise energy requirements.
- To advise nutritional guidelines adjusted to the physical activity that a person develops.
- To know the dietary supplements available that could be used to try to optimize performance.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), in such a way that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement:

Goal 3: Health and wellness

Goal 4: Quality education

2. Learning results

The student, in order to pass this subject, must demonstrate the following results:

- To have acquired basic scientific training related to nutrition applied to physical activity and sport in its different manifestations
- To have understood the scientific fundamentals of nutrition and food.
- To apply theoretical knowledge to the resolution of nutritional problems posed as problems or as practical demonstrations
- To have assessed the nutritional aspects linked to nutritional ergogenic, body weight and composition.

3. Syllabus

Theoretical program:

1. Introduction. Healthy nutrition in sports practice.
2. Carbohydrates and exercise.
3. Protein and exercise.
4. Lipids, fibre and exercise.
5. Vitamins, minerals and exercise.
6. Hydration in sports.
7. Supplements and ergogenic aids.
8. Vegans and vegetarians.
8. Nutritional assessment.
9. Dietary recommendations for different sports activities.

Practical program:

1. Label reading, nutritional information and recommendations.
2. Analysis of bars and gels.
3. Development of a double-blind randomized controlled trial with carbohydrates.
4. Evaluation of hydration and effects on performance.
5. Food weighing.
6. Supplementation analysis.
7. Analysis of the documentary film Game changers- search for articles for and against
8. Design of food for athletes
9. Elaboration of pre- and post-competition dietary recommendations

4. Academic activities

The weekly schedule for this subject consists of 2 hours of theory and 2 hours of seminars and/or practices, which will be carried out according to the official timetable that appears on the Faculty's web page at the beginning of the corresponding year.

Theoretical class, single group, where the topics covered in the program will be discussed.

Seminars, single group, where different topics will be worked on, in relation to the program of the subject, in a more pluralistic way, with debates, role playing, etc

Practices, in 2 groups, where we will work in an applied and eminently practical way, the topics covered in theoretical classes, as well as in seminars

Delivery of group work: to be determined by the teacher during the presentation of the subject

Submission of individual work: an abstract of a scientific article or a review of 5 articles (depending on the type of evaluation). Explained in point "5. Evaluation system" related to the subject).

Written test: date of the official call dates in January and June.

5. Assessment system

Students may follow either the continuous evaluation or the global evaluation described below:

1. Continuous assessment In order to be eligible for this evaluation, students must attend 80% of the classes.

- a. Theoretical written test (40%): Multiple choice questions (60%) and short questions and problem solving (40%). The final grade will be from 0 to 10. The examination will be held on the date set by the official examination calendar.
- b. Individual work (20%): Students will have to individually present a scientific article in in a poster format agreed with the teacher. The poster should be delivered in PPT format on the date set by the teacher during the course presentation.
- c. Group work (40%): Students will have to design an experiment related to the subject and present it in in written and oral format on the date set by the teacher.

2. Global Evaluation: Any student may sit for this evaluation.

- a. Theoretical written test (50%): It will have multiple choice questions (60%) and short questions and problem solving (40%). The final grade will be from 0 to 10. The examination will be held on the date set by the official examination calendar.
- b. Practical written test (20%): Practical cases will be presented, and problems seen in the practical classes and seminars will be solved. The final grade will be from 0 to 10. The examination will be held on the date set by the official examination calendar.
- c. Individual work (30%): students will have to perform individually a review including at least 5 original articles that study the effect of a nutritional supplement on body composition or performance. The presentation of this work will be mandatory to pass the subject and will be handed in and presented on the day of the exam. It will be graded from 0 to 10.

In order to pass either of the two options it will be necessary to obtain a grade equal to or higher than 4 in the evaluation in the 3 parts

If they pass one of the parts (exam or papers) and fail the other, the passed part will be kept until the second call

Regardless of the option selected, students will have the possibility to improve their final grade by obtaining a maximum of 0.5 extra points, which in the best case will allow the student who has passed the subject to improve their grade. The activity to be carried out, and its corresponding grade, must be previously agreed with the faculty responsible for the subject, prior to the realization of the same.

An example of an activity is the attendance and participation in conferences or other events considered of interest for their

contents for the student's training in this subject.

Fraud or total or partial plagiarism in any of the evaluation tests will result in not passing the subject with the minimum grade, in addition to the disciplinary sanctions adopted by the Guarantee Committee for these cases.

6. Sustainable Development Goals

3 - Good Health & Well-Being

4 - Quality Education