COURSE DATA

DATA SUBJECT

Code: 33953
Name: Food and Sporting Nutrition
Cycle: Undergraduate Studies
ECTS Credits: 4.5
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
1205 - Degree in Human Nutrition and Dietetics	Facultat de Farmàcia i Ciències de l'alimentació	4	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1205 - Degree in Human Nutrition and Dietetics	Sports food and nutrition	ELECTIVES

COORDINATION

ESTEVE MAS MARIA JOSE

SUMMARY

The subject Food and Sports Nutrition is an elective course taught during the first semester of the fourth year of the Bachelor's Degree in Human Nutrition and Dietetics. In the current curriculum (2009 Plan), it has a total of 4.5 ECTS credits (1 ECTS credit is equivalent to 25 hours).

The main objective of this course is for students to acquire a solid understanding of physiology and biochemistry as applied to sports. It will address nutritional assessment in sports, as well as nutritional planning during the training, competition, and recovery phases, with special attention to short, medium, and long-duration sports. Students are also expected to learn about the ergogenic nutritional aids currently used in sports.

As future professionals in the field of Health Sciences, graduates will not be able to avoid the use of these concepts, which are highly relevant in current practice.

In addition, the course seeks to involve students in a comprehensive educational process that encompasses a broad set of knowledge, values, attitudes, and skills linked to the principles of sustainability. The aim is to contribute to the achievement and implementation of the Sustainable Development Goals (SDGs), working on various objectives with a firm commitment to the defense of human rights, gender equality, and the empowerment of women.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

The study of the subject of "Food and nutrition sports" is based on the practical implementation of many of the knowledge gained in courses in the first cycle "Physiology", "Biochemistry", and "Nutrition".

COMPETENCES / LEARNING OUTCOMES

1205 - Degree in Human Nutrition and Dietetics

Adquirir la formación básica para la actividad investigadora, siendo capaces de formulas hipótesis, recoger e interpretar la información para la resolución de problemas siguiendo el método científico, y comprendiendo la importancia y las limitaciones del pensamiento científico en materia sanitaria y nutricional.

Adquirir la terminología propia de la materia de Alimentación y Nutrición deportiva.

Conoce, valorar críticamente y saber utilizar y aplicar las fuentes de información relacionadas con nutrición, alimentación, estilos de vida y aspectos sanitarios.

Desarrollar la profesión con respeto a otros profesionales de la salud, adquiriendo habilidades para trabajar en equipo.

Evaluate the nutritional status of the sportsperson.

Identify the foods and nutrients of nutritional importance in sports.

Know about possible disturbances in eating behaviour that may be detected in different sports, as well as their treatment.

Know about the different types of nutritional ergogenic aid and their potential benefits and contraindications.

Realizar la comunicación de manera efectiva, tanto de forma oral como escrita, con las personas, los profesionales de la salud o la industria y los medios de comunicación, sabiendo utilizar las tecnologías de la información y la comunicación especialmente las relacionadas con nutrición y hábitos de vida.

Study the different types of sports (short, medium and long duration) and the main nutritional considerations.

Study the food and nutrition recommendations in periods of training, competition and recovery.

DESCRIPTION OF CONTENTS

1. **Physiological and bioenergetic fundamentals**
   - 1.1. Neuromuscular, cardiorespiratory and endocrine physiology according to sport modality
   - 1.2. Bioenergetics and energy metabolism in exercise
   - 1.3. Adaptations to training, muscle recovery and injury prevention
2. **Nutritional assessment and diagnosis**
   - 2.1. Nutritional assessment of athletes: anthropometry, dietetics and biochemistry
   - 2.2. Energy availability and nutritional risks: RED-S and eating disorders
3. **Nutrition tailored to specific sports**
   - 3.1. Nutrition in anaerobic, strength and weight control sports
   - 3.2. Strategies for increasing muscle mass and reducing fat mass
   - 3.3. Nutrition in aerobic and ultra-endurance sports
   - 3.4. Nutrition in team sports and aesthetic sports
4. **Personalised nutrition and planning**
   - 4.1. Nutrition for vegetarian and vegan athletes
   - 4.2. Nutritional timing
   - 4.3. Food logistics: travel, training camps, canteens and home-delivered meals
5. **Clinical integration and case studies**
   - 5.1. Technology applied to sports nutrition
   - 5.2. Applied clinical cases: diagnosis, intervention and follow-up
6. **Practices**
   - 6.1. Body and functional assessment
     - Bioimpedance and skinfold measurements: Body composition assessment and critical analysis of methods.
     - Interpretation of metabolic parameters (VO, RER) and their nutritional implications.
     - Post-exercise lactate: Relationship between intensity, anaerobic metabolism and nutrition.
     - Calculation of energy requirements and adjustment according to sporting objectives.
   - 6.2. Supplementation and sweating
     - Evaluation of supplements: Analysis of labels, usefulness and risks.
     - Measurement of Na/K in sweat: Design of personalised hydration strategies.
     - Nutritional strategy: Menu planning and supplementation according to sporting profile.
     - Final practical case study: Integration of knowledge and defence of nutritional proposal.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Tutorials	2,00
Theory	30,00
Seminar	2,00
Laboratory	8,00
Total hours	**42,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	12,00
Independent study and work	20,00
Preparation of lessons	12,00
Preparation for assessment activities	12,00
Resolution of case studies	11,50
Total hours	**67,50**

TEACHING METHODOLOGY

The course is structured around five complementary teaching methods, aimed at the progressive acquisition of knowledge, skills and professional attitudes in the field of sports nutrition.

Theoretical classes

These will be held in one-hour sessions, with a total of 30 sessions. Lectures will be used as the main method, combined with audiovisual resources, brief case studies and interactive activities. The flipped classroom methodology will be incorporated on occasion, in which students will be required to review theoretical materials (videos, readings, outlines) available in the 'Virtual Classroom' beforehand, so that the face-to-face session can be devoted to analysis, problem solving and critical discussion.

The teacher will present the key content of each thematic block, facilitating contextualised and professional analysis. The material needed to follow the classes will be available in advance on the 'Virtual Classroom' platform.

These sessions are mainly aimed at the acquisition of theoretical knowledge and, to a lesser extent, procedures and attitudes.

Attendance and participation will be monitored.

Practical sessions

Attendance is compulsory. These sessions will consist of two intensive sessions, each lasting four hours. Work will be carried out in small groups, addressing aspects such as body assessment, metabolic analysis, nutritional planning and supplementation. Each session will have a detailed protocol and case study activities, which will be included in the 'Practical Workbook'.

During these sessions, representative calculations will be reviewed and clinical reasoning will be encouraged. Students must submit their results and reflections during the week following the practical session.

These sessions are mainly aimed at acquiring practical skills and, to a lesser extent, professional attitudes and applied knowledge.

Seminars

All students enrolled in the course are required to organise and attend the coordinated seminars. The topic and format will be proposed by the students and agreed upon with the lecturer, in accordance with the current regulations published on the Faculty website.

The preparation of each seminar will be supervised through tutorials, agreed between the professor and the students, in order to guide the development of the work and ensure its academic quality. Seminars must be submitted in writing and will be presented orally by the students to the group.

During the seminars, the inclusion of specific objectives linked to one or more Sustainable Development Goals (SDGs) will be encouraged, depending on the focus of the topic covered.

The assessment of this activity will take into account both the quality of the scientific content addressed and the way in which it has been presented. Particular emphasis will be placed on communication skills, the clear transmission of ideas and concepts, and the ability to work in a team and collaborate effectively within the group.

Tutorials

There will be two compulsory group tutorials. They will last one hour and will serve to guide the learning process, resolve queries and reinforce study strategies. The teacher will assess the student's overall progress and offer personalised recommendations.

Assignments/activities

Throughout the course, practical exercises, case studies and problem-solving related to sports nutrition will be assigned. These assignments will allow students to apply the theoretical and practical content and will be taken into account in the final grade.

EVALUATION

The assessment of knowledge, skills and abilities will be carried out in the form of continuous assessment throughout the course. The following will be considered assessable parameters: a) final theoretical-practical written test in which the degree of general knowledge of theoretical concepts and procedures presented for each topic will be assessed; b) individual and/or group reports on exercises related to the various activities in the classroom, computer room and laboratory, which will assess the acquisition of skills and attitudes defined ad hoc for the subject,

as well as the work carried out by the student and their understanding of basic procedures and concepts; c) preparation and participation in seminars: written work and presentation (the scientific content of the work will be assessed, as well as the ability to present and debate with teachers and classmates, and the ability to integrate into the working group); d) other tasks proposed throughout the course, the completion of which will be announced to students sufficiently in advance; e) student attitude (assessed on the basis of individual and group tutorials, and participation in practical classes and seminars presented and discussed in the classroom); f) class attendance.

The assessment will be distributed, for the purposes of percentage grading, as follows:

Assessment of theoretical content: Assessment will be based on theoretical questions in a written examination. Questionnaires or activities carried out in preparation for theoretical classes will also be considered in the final theory mark (maximum 25% of the assessment of theoretical content). The result of this assessment will represent **60%** of the final mark for the subject.

Assessment of practical classes: The mark obtained in this assessment will represent **15%** of the final mark for the subject. 40% of the practical classes will be assessed based on the attitude and aptitude demonstrated (care and use of materials, performing calculations, recording all work carried out in the laboratory, preparation of practical work, etc.) and the submission of the worksheets at the end of each session. On the last day of practical classes, there will be a written exam with practical questions (theoretical concepts, calculations and interpretation of results), which will account for 60% of the practical grade.

Seminar assessment: The seminar will contribute **10%** to the final mark for this subject. The work carried out will be assessed, including the scientific content of the work, the preparation work and the ability to present it in public and discuss it with the lecturer and classmates, as well as integration into the group. Attendance at seminars will also be considered; failure to attend will result in a zero in the assessment section corresponding to seminars.

Assessment of tutorials: The assessment of this section will represent **5%** of the final mark for the subject. This mark will consider the completion of the proposed activities (the mark will be distributed according to the number of tasks and/or questions proposed). Attendance will also be considered; non-attendance will result in a zero in the assessment section corresponding to tutorials.

Assessment of tasks/activities: The assessment of this section will represent **10%** of the final grade for the course. This grade will consider the completion of the tasks proposed in class or in the virtual classroom, other than laboratory practical and tutorials (the mark will be distributed according to the number of tasks and/or questions proposed).

Attendance at practicals, tutorials, and seminars is **mandatory and non-recoverable**, in accordance with Article 6.5 of the UV Evaluation and Qualification Regulations for Bachelor's and Master's degrees. If a student cannot attend for justified reasons, they must notify the instructor in advance to be reassigned to another group.

Cannot be condoned the subject if either of these circumstances:

1. Did not obtain at least 45% of the score assigned to theoretical exam.

2. Did not obtain at least 50% of the score assigned to theoretical content.

3. That the overall rating of the subject is less than 5.

If the subject is failed in the **first call**, only the grades for laboratory work, booklets, tutorials, homework, seminars, and tasks will be retained for the second call. The written exam grade will not be retained, including theoretical questions not linked to practical ones.

If the subject is failed in the **second call**, laboratory practices do not need to be repeated for the next two academic years.

Repeat students must attend tutorials again in subsequent enrollments. Previous attendance and grades will not be retained. The grade for tasks will also not be retained. Repeat students unable to attend tutorials and seminars must provide proper justification.

Students who do not sit the written exam will be marked as Not Presented.

Evidence of copying or plagiarism in any of the assessable tasks will result in failure to pass the subject and in appropriate disciplinary action being taken. Please note that, in accordance with article 13. d) of the Statute of the University Student (RD 1791/2010, of 30 December), it is the duty of students to refrain from using or participating in dishonest means in assessment tests, assignments or university official documents.

In the event of fraudulent practices, the "Action Protocol for fraudulent practices at the University of Valencia" will be applied (ACGUV 123/2020): https://www.uv.es/sgeneral/Protocols/C83sp.pdf

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