1. BASIC INFORMATION

Course	Designing exercise programs for chronic-degenerative diseases
Degree program	Bachelor in Sport Sciences
School	Medicine, Health and Sports
Year	4º
ECTS	6
Credit type	Optative
Language(s)	Spanish and English
Delivery mode	Face-to-face
Semester	S8
Academic year	2027-2028
Coordinating professor	Silvia Burgos Postigo

2. PRESENTATION

The design of exercise programs for patients with specific medical conditions such as cancer, osteoarticular diseases, and respiratory obstructive diseases is an area of great relevance in the field of health. This course aims to provide students with the knowledge, skills, and competencies necessary to develop, implement, and evaluate exercise programs tailored to the individual needs of these patients.

Students will study the medical characteristics of these diseases, the importance of therapeutic exercise, the functional assessment of these patients, and the individualization of physical exercise.

The course will combine theoretical classes, practical workshops in the training and exercise physiology laboratory. Active student participation will be encouraged through discussions, presentations, and group work. Additionally, technological resources and continuous assessment tools will be used to ensure comprehensive and up-to-date training.

3. LEARNING OUTCOMES

Knowledge

KON3. Describes geared towards prevention, adaptation and improvement of physical and sporting performance and health through physical condition and exercise.

- Identifies key aspects of physical exercise programmes for cancer.
- Identifies key aspects of physical exercise programmes for osteoarticular diseases.
- Identifies key aspects of physical exercise programmes for respiratory diseases and develop physical exercise programmes for people with these diseases.

- Identifies key aspects of physical exercise programmes for rare diseases and develops physical exercise programmes for people with these diseases.

Skills

Sk2. Plans physical exercise activities, progressions and strategies to promote health and sports performance based on individual and environmental factors.

- Develops physical exercise programmes for people with cancer.
- Develops physical exercise programmes for people with osteoarticular diseases.

Abilities

CP5. Develop the expertise to lead, plan and implement physical exercise and fitness programmes, and conduct technical/scientific evaluations of them, based on scientific evidence, in different fields, contexts and activities for the entire population, with a focus on particular groups such as senior citizens (the elderly), schoolchildren, people with disabilities and people with diseases, health problems or similar conditions (diagnosed and/or prescribed by a physician), taking into account gender and diversity considerations.

CP6. Develop the expertise to identify, communicate and apply anatomical, physiological and biomechanical scientific principles in order to develop and carry out appropriate procedures, strategies, initiatives, activities and guidance, as well as conduct technical/scientific evaluations of them; ultimately to prevent and/or minimise the health risks to which all groups of the population are exposed in the practice of physical activity and sport.

CP12. Design, promote, advise on and implement appropriate and diverse physical activity, exercise and sports programmes, and conduct technical/scientific evaluations of them. These programmes must be tailored to the needs, requirements and characteristics of individuals and groups within the entire population, with a focus on senior citizens (the elderly), women, diverse populations, schoolchildren, people with disabilities and people with diseases, health problems or similar conditions (diagnosed and/or prescribed by a physician).

CP40. Teamwork. Cooperate with others in shared academic or professional objectives, participating actively, empathically and exercising active listening and respect for all members.

CP41. Critical analysis. Integrate analysis with critical thinking in a process of evaluating different ideas or professional possibilities and their potential for error, based on evidence and objective data that lead to effective and valid decision-making.

CP42. Resilience. Adapt to adverse, unexpected situations that cause stress, whether personal or professional, overcoming them and even turning them into opportunities for positive change.

4. CONTENT

Topic 1. Benefits of Exercise Programs in Cancer

Topic 2. Exercise Recommendations in Cancer and Practical Application

Topic 3. Benefits of Exercise Programs in Osteoarticular Diseases

Topic 4. Exercise Recommendations in Osteoarticular Diseases and Practical Application

Topic 5. Benefits and Recommendations of Exercise Programs in Obstructive Diseases

Topic 6. Benefits and Recommendations of Exercise Programs in Less Common Diseases

5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Lecture
- Case method
- Learning based project

6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

Campus-based mode:

Learning activity	Number of hours
Lectures	12
Practical application classes	18
Independent work	56
Debates and colloquiums	8
Tutorials	12
In-person assessment tests	2
Cases analysis	22
Designing strategies and intervention plans	20
TOTAL	**150**

7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

Campus-based mode:

Assessment system	Weight
In-person assessment tests	40-50%
Case/Problem	25-30%
Designing strategies and intervention plans	25-30%

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

7.1. First exam period

To pass the course in the first exam period, you must obtain a final course grade of at least 5 out of 10 (weighted average).

In any case, you will need to obtain a grade of at 5.0 in the final exam in order for it to count towards the final grade along with all the grades corresponding to the other activities.

7.2. Second exam period

To pass the course in the second exam period, you must obtain a final grade of at least 5 out of 10 (weighted average).

In any case, you will need to obtain a grade of at 5.0 in the final exam in order for it to count towards the final grade along with all the grades corresponding to the other activities.

The student must deliver the activities not successfully completed in the first exam period after having received the corresponding corrections from the professor, or those that were not delivered in the first place.

8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Assessable activities	Deadline
Activity 1: Functional assessment of cancer patients	Week 3
Activity 2: Design and practical application of exercise program in cancer patients	Week 5

Activity 3: Functional assessment of osteoarticular disease patients	Week 7
Activity 4: Design and practical application of exercise program in osteoarticular disease patients	Week 9
Activity 5: Functional assessment of obstructive disease patients	Week 11
Activity 6. Design and practical application of exercise program in obstructive disease patients	Week 13
Activity 7. Functional assessment of low incidence disease patients	Week 15
Activity 8. Design and practical application of exercise program in low incidence disease patients	Week 16

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

9. BIBLIOGRAPHY

The main reference work for this subject is:

- Delgado, J. P., & de Casasola Sánchez, G. G. (Eds.). (2023). Fisiopatología y patología general básicas para ciencias de la salud. Elsevier Health Sciences.

Institutions

- American Cancer Society. https://cancer.org/
- Sociedad Española de Oncología Médica. https://seom.org/
- Sociedad Española de Neumología y Cirugía Torácica. https://www.separ.es/
- European Respiratory Society. https://www.ersnet.org/
- Sociedad Española de. Reumatología. https://ser.es/
- Eurobarómetro.http://ec.europa.eu/spain/sobre-la-ue/euro-barometro/index_es.htm
- Instituto Nacional de Estadística. http://www.ine.es/
- Organización Mundial de la Salud. http://www.who.int/es/

Recommended scientific articles for students will be provided, in each class presentation.

10. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT

From the Educational Guidance and Diversity Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:

orientacioneducativa@universidadeuropea.es

11. ONLINE SURVEYS

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the “surveys” section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.