

60860 - Physical exercise and ageing

Syllabus Information

Academic year: 2023/24

Subject: 60860 - Physical exercise and ageing

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

Degree: 549 - Master's in Evaluation and Physical Training for Health

ECTS: 3.0

Year: 1

Semester: Second semester

Subject type: Optional

Module:

1. General information

The main objective of this subject is to train future researchers who are interested in physical exercise for the elderly and know how to develop excellence research responding to the challenges of today's society.

In addition, students will learn about the demographic trends of older population and the main physiological, psychological and social changes that occur as a result of the aging process.

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/>), so that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement.

- Objective 3: Health and Well-being.
- Objective 4: Quality Education.
- Objective 5: Gender Equality.

2. Learning results

Upon completion of this subject, the student will be able to:

- Know the demographic characteristics of elderly population in the world and in Spain.
- Study the physiology of aging and learn about age-specific responses and adaptations to exercise.
- Learn the scientific evidence on which the relevance of physical exercise in the elderly is based.
- Assess the levels of physical fitness and physical activity in the elderly using specific instruments, as well as design physical exercise programs adapted to the characteristics of this population.
- Know the relationship between functional capacity and the factors of the aging process.

3. Syllabus

1. Introduction and key concepts.
2. Demographics of aging.
3. Physiology of aging: musculoskeletal and cardiorespiratory systems.
4. Frailty, assessment of physical fitness and functional capacity.
5. Planning a physical exercise program for the elderly.
6. Design of exercise programs for health improvement (programs for the improvement of muscular strength and endurance, aerobic endurance, flexibility, coordination and balance).

4. Academic activities

The learning process designed for this subject is based on the following:

The credits for this subject are distributed as follows: 60% theoretical classes and 40% seminars, activities and assignments.

Theoretical classes: students are introduced to the basic theoretical knowledge of the subject, which will deal with the topics presented in the syllabus.

Seminars, activities and assignments: students are introduced to tools for the assessment of various components related to the elderly. They will also have to deal with problem and case solving individually or in groups, depending on the nature of the task.

Tutorials: whenever necessary, students, individually or in groups, will check via email the availability of appointments for tutorials through the Google Meet platform.

Autonomous work: Students will work on the contents of the subject in an autonomous way. This does not require personal attendance. The teacher will guide this autonomous work.

5. Assessment system

Students enrolled in this subject will have the option of being evaluated through **continuous assessment**.

The assessment will consist of three parts:

- **Written test (70%):** 40 multiple-choice questions, with a single correct answer among five options. For every four incorrect questions, the value of a correct question will be subtracted. Students will have 90 minutes. This test will be held on the date and at the place published by the corresponding centre in the calendars of each degree in 1st and 2nd call. In a non-face-to-face scenario due to a health crisis, this test would be conducted, with the same characteristics (number of questions, time, etc.) on the Moodle platform, within the space provided for the subject.
- **Written work and presentation of infographics (30%):** This part will include an assessment of a systematic review (with or without meta-analysis) and its subsequent oral presentation by means of an infographic-summary.

Students enrolled in this subject will have the option of being evaluated by means of a **global** test, which will include an exam with multiple choice questions and short questions.