

Academic Year/course: 2021/22

26329 - Physical Activity and the Elderly

Syllabus Information

Academic Year: 2021/22

Subject: 26329 - Physical Activity and the Elderly

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: 4 and 3

Semester: Second semester

Subject Type: Optional

Module:

1. General information

1.1. Aims of the course

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

1. To know the demographic trends of the elderly population worldwide and to analyze its main characteristics.
2. To know the main physiological, psychological, and social changes that occur as a result of aging.
3. To know the benefits that physical exercise has on older people.
4. To know how to identify risk factors in older people who want to carry out a physical activity program.
5. To perform tests for the evaluation of health-related physical fitness in the elderly.
6. To design exercise programs aimed at improving the health-related physical fitness components and cognitive function while encouraging leisure and recreation.
7. To carry out specific adaptations at the level of methodology, facilities, and materials with older people when performing physical activity programs.
8. To develop physical activity programs for older people adapted to some of the most frequent pathologies in the elderly.

1.2. Context and importance of this course in the degree

Physical activity and the elderly is an optional subject of the Degree in Sciences of Physical Activity and Sport at the University of Zaragoza.

First, the subject provides the essential knowledge to identify the basic principles of the assessment and physical exercise prescription in the elderly. The subject aimed at promoting health through the harmonious development of the person, and the promotion of healthy habits at the population level. This subject is the basic necessity in the field of health since it is aimed at a growing population sector in which physical activity and exercise have a key role in achieving healthy aging. The World report on Aging and Health published in 2015 by the World Health Organization recognizes this fact.

1.3. Recommendations to take this course

Legal recommendations: none.

Essential recommendations: to have completed physical activity and health and physical activity in specific populations courses. It is recommended to know how to perform bibliographic searches, interpretation of statistical analysis, and scientific language.

Advisable Recommendations: to have basic knowledge of English, statistics, and computer science. Students must have the Unizar Google Apps account active. It is advisable to have basic knowledge of the online teaching platform, Moodle, and Google Meet.

Students should consult the bibliography recommended by the faculty through the corresponding link.

2. Learning goals

2.1. Competences

The student will be more competent to:

In addition to contributing to the development of the general competences described in the curriculum of the degree, this subject is related to the followings specific competences:

CE01 ? To design, develop and evaluate the intervention processes, related to physical activity and sports with attention to the individual and contextual characteristics of the people.

CE08 ? To promote and evaluate the formation of enduring and autonomous habits of the healthy practice of physical activity and sports.

CE14 ? To know the motor acts as an object of fundamental study in the field of sports sciences.

CE15 ? To evaluate the conditions and characteristics of the subject relevant to the practice of physical activity.

CE22 ? To plan, develop and evaluate the realization of teaching-learning programs based on the practice of physical activities.

CE24 ? To select and know how to use sports equipment suitable for each type of activity.

CE25 ? To know the characteristics and potentialities of the spaces for practicing physical activity attending all types of populations.

CE26 ? To value, transmit and enhance pleasure and enjoyment associated with the practice of physical activity.

2.2. Learning goals

To pass this subject the students must demonstrate the following results:

1- He/she has acquired the basic scientific training related to physical activity and the prescription of physical exercise in the elderly based on their needs.

2- He/she has understood the scientific fundamentals of exercise science applied to the process of aging.

3- He/she can solve practical cases by applying the theoretical knowledge of physical activity for the elderly.

2.3. Importance of learning goals

They allow the student to know the benefits of physical activity in older people. They will provide tools for the performance of their work as a professional in the field of physical activity and sports Sciences in its facet most related to health, quality of life, and prescription.

3. Assessment (1st and 2nd call)

3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

Students enrolled in this subject will have the option of being assessed through a global assessment. The global assessment will consist of 40 multiple-choice questions. The questions will be single-answer among five options, and for every four incorrect questions, one will be subtracted. Students will have 60 minutes to do it. This test will be carried out on the date and in the place published by the Center in the calendars of each degree in 1st and 2nd calls. In a scenario of not attending due to health crisis, this test would be carried out, with the same characteristics (number of questions, time, etc.) on the Moodle platform, within the space enabled for the subject. Students enrolled in this subject will have the option of being evaluated through continuous assessment.

The evaluation will consist of three parts:

- Exam (50%): 40 multiple-choice, single-answer questions among five options, and for every four incorrect questions, one will be subtracted.
- Practice sessions and seminars (40%): In this section all the practices and seminars carried out during the course.
- Individual work (10%): Students will have to individually review a scientific article. The teacher will enable an active role for the student.
- The presentation of this work will be mandatory to pass the subject. It will be scored from 0 to 10.

To pass the subject globally, it will be necessary to obtain a score equal to or greater than 5 in the evaluation of the

Likewise, the students will have the possibility of improving their final grade obtaining a maximum of 1 extra point,

Exam for the second call

According to article 10 of title II of the Evaluation Regulation cited above, the second call will be carried out through a global exam carried out in the period established for that purpose by the Governing Council in the academic calendar.

The exam will consist of a test based on 40 multiple-choice questions, with a single answer among five options, and for every four incorrect questions, a correct one will be subtracted. Students will have 60 minutes to complete it.

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. It favors the understanding of the importance of physical activity in the elderly. The lectures, practice sessions, and seminars are interspersed, reducing the time that elapses since students acquire the knowledge until they apply them. Furthermore, the contact with older people belonging to different associations, together with professionals of physical activity in this field, will give the students a real and practical vision of the work with this population group.

Students are expected to participate actively in the class throughout the semester.

Classroom materials will be available via Moodle. These include a repository of the lecture notes used in class, the course syllabus, as well as other course-specific learning materials, including a discussion forum.

Further information regarding the course will be provided on the first day of class.

4.2. Learning tasks

This is a 6 ECTS course organized as follows:

- **Lectures (15 hours).** Whole group sessions of 60 minutes each one. The professor will explain the theoretical contents, which are available in advance on the virtual platform Moodle.
- **Seminars (30 hours).** Students will solve problems and cases individually or in groups according to the nature of the task.
- **Practice sessions (30 hours).** In small groups, students will prepare a session focusing on a health-related physical fitness component. They will take place in different facilities of the faculty.

Given the exceptional situation for the 2020/21 academic year, the way of carrying out the different learning activities will be subject to the availability of physical spaces in the Center. Whenever possible, classes will be held in person at the places and spaces indicated by the center. In a scenario of not attending due to a health crisis, the learning activities will be carried out telematically, synchronously, keeping on schedule, through Google Meet. All the activities will be recorded and made available to the students through a link that will be provided in each of the schemes provided through the Moodle platform by the teachers.

- **Tutorials:** Whenever necessary, students individually or in groups, will request via email the availability for tutoring electronically through the Google Meet platform.
- **Autonomous work:** Students will work the contents of the subject autonomously and not face-to-face. The teaching staff will guide said autonomous work.

4.3. Syllabus

The course will address the following topics:

Lectures:

- Topic 1. Introduction and key concepts.
- Topic 2. Analysis and description of the elderly population. Demographic changes.
- Topic 3. Process and aging markers.
- Topic 4. Aging of the muscular system and changes in body composition.
- Topic 5. Aging of the cardiovascular system.
- Topic 6. Importance and benefits of physical activity in old age.
- Topic 7. Planning a physical activity program for seniors.
- Topic 8. Exercise prescription for older people.
- Topic 9. Active options for older people with diseases.
- Topic 10. Latest contributions to physical exercise in the elderly.

Practice sessions

- P1 Assessment of functional physical condition.
- P2 Assessment of functional physical condition in older people.
- P3. Multicomponent session in older people.
- P4 Session for the improvement of muscular strength and endurance in older people.
- P5 Session for the improvement of muscular strength and endurance in older people.
- P6 Session for the improvement of cardiovascular resistance in older people.
- P7 Session for the improvement of cardiovascular resistance in older people.
- P8 Session to improve balance and coordination in older people.
- P9 Session to improve balance and coordination in older people.
- P10 Multicomponent session in older people.
- P11 Multicomponent session in older people.
- P12. Multicomponent session in older people with some diseases.
- P13 Multicomponent session in older people with some diseases.
- P14 Planning a physical exercise program for older people.

- Seminars Program

- S1 Assessment of functional fitness in older people (Senior Fitness Test).
- S2. Database on physical activity and elderly people (SPSS).
- S3. Scales of assessment of activities of daily living, disability and autonomy.
- S4. Instruments and tools for the assessment of cognitive impairment in the elderly.
- S5. The use of physical exercise to improve physical function and frailty in the elderly.
- S6. Assessment of physical activity in older people.
- S7. Benefits of physical activity in older people.
- S8. Planning a physical activity program in older people.
- S9. Health questionnaires and quality of life in older people.
- S10. Mobility and cognition in older people.

4.4. Course planning and calendar

Assessment dates

- Students must upload the manuscript to Moodle 3 weeks before the oral presentation.
- Students must upload the content 2 week before the oral presentation.
- The oral presentation of the project will take place on the last day of class.
- Official exam dates: June and September.

Provisional course planning

| | Seminars | Practice sessions | Lectures |
|---------|----------|-------------------|----------|
| Week 1 | S1 | P1 | T1 |
| Week 2 | S2 | P2 | T2 |
| Week 3 | S2 | P3 | T3 |
| Week 4 | S3 | P4 | T4 |
| Week 5 | S4 | P5 | T4 |
| Week 6 | S5 | P6 | T5 |
| Week 7 | S5 | P7 | T5 |
| Week 8 | S6 | P8 | T6 |
| Week 9 | S7 | P9 | T7 |
| Week 10 | S8 | P10 | T8 |

| | | | |
|---------|--------------------|-----|-----|
| Week 11 | S9 | P11 | T8 |
| Week 12 | S9 | P12 | T8 |
| Week 13 | S10 | P13 | T9 |
| Week 14 | S10 | P14 | T10 |
| Week 15 | oral presentations | | |

4.5. Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=60860&year=2020