Universidad Zaragoza

Academic Year/course: 2021/22

60858 - Basic Kinanthropometry

Syllabus Information

Academic Year: 2021/22
Subject: 60858 - Basic Kinanthropometry
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

1.1. Aims of the course

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

The fundamental aim of this subject is to introduce students to the field of kinanthropometry. In addition to knowing the protocols, procedures, and measurements recommended by the International Society for the Advancement of Cineanthropometry (ISAK), this course aims to train future researchers interested in the field of body composition, health, and performance through kinanthropometry.

1.2. Context and importance of this course in the degree

Kinanthropometry is an optional subject, located in the second semester, within module IV "Body composition" and with a curricular load of 3 ECTS.

Kinanthropometry is the academic discipline that involves the use of scientific procedures and processes to obtain superficial anatomical dimensional measurements such as the lengths, perimeters, and skinfolds of the human body by means of specialized material and its relationship with other scientific parameters and/or thematic areas such as human movement, physiology or science applied to health.

1.3. Recommendations to take this course

Legal recommendations: they do not exist.

Essential recommendations: Students are strongly recommended to read and consult basic and specific bibliography. Students must have elementary knowledge to perform bibliographic searches, interpretation of statistical analysis, and scientific language.

Advisable recommendations: students are strongly recommended to have a participative and critical-constructive attitude in teaching activities. Also, students must have a basic knowledge of English, statistics, and computers. 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.

2. Learning goals

2.1. Competences

In this subject, as in the rest of the Master's subjects, all general competences (instrumental, personal, and interpersonal and systemic relations) that appear in the Master's Report will be attended. In addition to the basic and general skills detailed in the report itself, students will acquire the following specific skills:

CE13 - Be able to apply and interpret the most appropriate methodology for assessing body composition and its influence on the health of different population groups.

CE2 - Employ strategies of excellence, ethics, and quality in research and professional practice in the field of Physical Activity for Health, following the recommendations of the Declaration of Helsinki and Law 14/2007 and

subsequent updates on Biomedical Research.

CE3 - Control the different methodological alternatives that can be applied in the framework of physical activity oriented towards health.

CE4 - Use different research techniques and apply them appropriately to the field of knowledge of the assessment and recommendation of physical exercise for health in different population groups. depending on age, sex, chronic diseases, disability, etc.

CE5 - Identify and assess health problems that affect different population groups, and in which physical exercise can have a positive impact on its treatment and subsequent improvement.

CE6 - Extract and adequately analyze the information from scientific texts in the framework of Physical Activity Sciences, assessing its possible link to the health field.

CE7 - Evaluate the physiological, anatomical, and biochemical changes that occur as a consequence of a health-oriented physical activity program.

2.2. Learning goals

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

Knowledge of the anthropometric method. ISAK method.

Management of anthropometric material: stadiometer, scale, caliper, and tape measure.

Location of anatomical points.

Taking measurements: height, weight, skinfolds, perimeters, and bone diameters.

Analysis of body composition by fractionation, somatotype, equations depending on the population and objectives, etc.

2.3. Importance of learning goals

They will allow students who pass this subject to make an assessment of anthropometric characteristics and body composition with methodological guarantees and quality. The learning outcomes would be related to:

Adequately assess the state of health using the tools provided for this purpose. Correctly identify and analyze anatomical landmarks. Conveniently select the different possibilities for evaluating body composition using anthropometric formulas. Apply pertinently the tests and protocols for assessing body composition that is most appropriate for each case.

Assess the somatotype calculated by the anthropometric method.

3. Assessment (1st and 2nd call)

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

Students must demonstrate that they have achieved the expected learning outcomes through the following assessment activities:

Students enrolled in this subject will have the option of being assessed through a global or continuous assessments.

Global assessment

It 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 complete 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 call. 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.

Continuous assessment

Carrying out the activities proposed by the teaching staff during the course development. 40% of the final grade.

Carrying out a practical case. 20% of the final grade.

Exam at the end of the teaching, through the Moodle platform, with a questionnaire of 30 multiple-choice questions and a time of 45 minutes. 40% final grade.

To pass the subject globally, it will be necessary to obtain a score equal to or greater than 5 in the evaluation of the written test, the activities and tasks, and the practical case as a whole. The weighted global grade of the subject will be computed by weighing the grade obtained in each of the parts.

Tests for the second call of each academic year.

According to article 10 of title II of the Evaluation Regulation mentioned above, the second call will be carried out by means of a global test carried out in the period established for this purpose by the Governing Council in the

academic calendar.

It 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 learning process that has been designed for this subject is based on the following:

Lecturers. The participatory master class will be used since we consider it as very appropriate to adapt to the general cognitive level objectives to the level of the student body. During the exhibitions, a dialogue will be promoted by asking questions seeking an active methodology. The thematic exhibitions will be supported by diagrams and illustrations through PowerPoint presentations. Practical classes. They are essential and contribute around 70% of the content of the subject. They will take place, if possible, in the spaces provided by the center and the necessary material for anthropometric measurements will be provided. (height rod, scale, pachymeter, tape measure, caliper) Students will also have to complete 10 anthropometric profiles.

Tutorials. Dedicated to solving doubts or providing a specific bibliography on a specific topic in relation to the theoretical or practical contents of the subject. The tutorial action will be carried out both face-to-face and non-face-to-face (telematically via email or the Digital Teaching Ring).

4.2. Learning tasks

The program offered to the student to help him achieve the expected results includes the following activities:

a) Theoretical Contents:

ISAK. History and organizational structure

Definition, terminology and anatomy

Preliminary considerations and anthropometric material

Anthropometric points and basic measurements

Folds and perimeters

Lengths and diameters

Ethics and anthropometry

Body composition

Somatotype

Anthropometric equipment and calibration: basic aspects of skinfold compass calibration, pachymeter, tape measure, scales and height meters

Statistics: technical measurement error (ETM), confidence intervals, real interpretation of changes, Phantom z-scores, percentiles.

Body composition: sum of skinfolds, regression equations, fat percentage, errors in fat percentage calculation equations

Somatotype: definition, basic calculations, somatocards, relationship with sports performance

Ethics: informed consent, measurement protocol, measurements in women and children, ethnic groups, cultures and sensitivities.

Nutritional status assessment

b) Practical Contents:

Identification of anthropometric points

Basic measures

Summation of skinfolds, body composition and somatotype

Anatomical reference marks necessary for the basic profile

Technical management of instruments (skinfold gauge, tape measure and pachymeter)

Supervised measurements of the basic protocol (10 measurements)

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 classrooms in the Center. Whenever possible, lecturers will be held at the places and spaces indicated by the center. In a scenario of not attending due to health crisis, the learning activities will be carried out on-line, synchronously, keeping on schedule, through Google Meet. All activities will be recorded and made available to students through a link that will be provided in each of the schemes provided through the Moodle platform by 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

Each of the contents explained in the previous section will be presented to students in that same order.

4.4. Course planning and calendar

Calendar of sessions and presentation of work

Classes will be held according to the academic schedule of the master. The dates for the tests corresponding to the first and second call will be communicated in the official exam calendar.

This subject has an optional character, teaching during the period between February and March. The final test of the course will take place in the official examination period established by the University of Zaragoza. The date of completion will be officially published on the website of the Faculty of Health Sciences and Sports.

4.5. Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=60858&year=2020