

60853 - Applied research methodology

Syllabus Information

Academic Year: 2019/20

Subject: 60853 - Applied research methodology

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

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

ECTS: 6.0

Year: 1

Semester: First semester

Subject Type: Compulsory

Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

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

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. A wide range of teaching and learning tasks are implemented, such as

- **Lectures.** Presentation of the course syllabus whose purpose is to transmit knowledge and activate the student's cognitive processes.
- **Practice sessions.** Students find out the right solutions to problems through the application of formulas or algorithms, etc. and the interpretation of the obtained results. Its purpose is exercising, testing and putting into practice the acquired knowledge.
- **Assignments.** Practical application tasks or research works.

4.2.Learning tasks

The course includes the following learning tasks:

- Research process planning.
- Registration and data coding: observation and recording instruments.
- Analysis of qualitative and quantitative data
- Document search
- Literature review

- Scientific writing
- Oral presentation of scientific communications.
- Project development and report of quantitative and qualitative research.

4.3.Syllabus

The course will address the following topics:

Topic 1. Methodology of scientific research:

- The nature of research.
- Methods and research design.
- Planning the research process.

Topic 2. Experimental methodology in Physical Activity, Sport and Health:

- The experiment. The experimental control.
- Experimental Design: Inter and intra-group, univariate and factorials.

Topic 3. Quasi-experimental methodology in Physical Activity, Sport and Health:

- Pre-pilot and quasi-experimental designs.
- N1 designs.
- Time series designs.

Topic 4. Selective-correlational Methodology in Physical Activity, Sport and Health:

- Sampling and sampling rates.
- Survey design.
- Questionnaires and surveys.

Topic 5. Observational designs applied to research in Physical Activity, Sport and Health:

- Observational Methodology. Basic concepts and Applications.
- Observational Designs.
- Registration and data coding instruments of observation and recording instruments.
- Types of observational data analysis: Sequential Analysis; obtaining t-patterns; technique Polar coordinates.

Topic 6. Qualitative methodology in Physical Activity, Sport and Health:

- Methods in qualitative research.
- Phases of qualitative research.
- Techniques of qualitative research.
- Analysis of qualitative data.
- Quality control in qualitative research.

Topic 7. Epidemiologic Studies:

- Prevalence studies.
- Case-control studies.
- Cohort and follow-up studies.

Topic 8. Documental sources in Physical Activity, Sport and Health:

- Sources
- Information search
- Literature review

Topic 9. Writing scientific texts:

- - Characteristics of scientific texts.
- - The papers.
- - Writing doctoral thesis, oral communication and scientific presentations.

Topic 10. Development of projects and reports in quantitative and qualitative research.

4.4.Course planning and calendar

All classes will take place in the first semester, Mondays from 5:30 pm to 7:00 pm and Wednesdays from 7:00 pm to 8:30 pm.

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class, and the Master's website <https://fccsyd.unizar.es/master-health-related-physical-fitness>.

4.5. Bibliography and recommended resources