

## 61051 - Advanced research techniques

### Información del Plan Docente

Academic Year	2018/19
Subject	61051 - Advanced research techniques
Faculty / School	127 - Facultad de Ciencias de la Salud
Degree	548 - Master's in Nursing Studies
ECTS	9.0
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 course "Advanced Research Techniques" has been designed taking into account the purpose of ensuring the acquisition of the competences described in the title. To do this, the syllabus consists of 18 topics, which will be taught through a combination of lectures and practice sessions, enabling students enrolled in the course to acquire the expected learning outcomes.

In this sense, the learning methodology proposed is rooted in critical rationalism and constructivism, in which based on previous experience and knowledge of students, is designed to give significance to the new through a dialogic process intra- and inter-subject, in which the theoretical and practical aspects of research converge in a continuum of the same reality.

### 4.2. Learning tasks

The course includes the following learning tasks:

- Lectures.
- Practice sessions.

### 4.3. Syllabus

The course will address the following topics:

Topic 1. The logic of clinical research. Classic research paradigms. Stages of the research process.

Topic 2. Scientific writing.

Topic 3. Ethical considerations in clinical research. The clinical research ethics committees. The CEICA in the autonomous community of Aragon.

Topic 4. Data management fieldwork. Definition and categorization of variables. Concept maps in clinical research.

Topic 5. Precision, accuracy, validity and reliability in clinical studies. Random errors and biases. Analysis of confusion.

Topic 6. Critical analysis of literature. Scientific evidence and recommendations for clinical practice.

Topic 7. General characteristics of epidemiological studies. Descriptive epidemiological studies.

Topic 8. Analytical observational studies.

Topic 9. Clinical trials.

Topic 10. Study designs of medical tests.

Topic 11. Designs sampling and determination of sample sizes in scientific studies.

Topic 12. Planning and information gathering. Quality assurance data.

Topic 13. Analysis of quantitative data: Descriptive statistics.

Topic 14. Analysis of quantitative data: Hypothesis Tests.

Topic 15. Multivariate analysis: experimental designs, regression models and logistic regression.

Topic 16. Introduction to other multivariate models. Factorial analysis.

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Topic 17. Summary and writing results.

Topic 18. Publication of research papers in scientific journals. Bibliometric indices magazines.

### **4.4.Course planning and calendar**

Lectures and practice sessions will take place on Thursday and Friday in the morning or afternoon, according to the schedule of the Master's degree in Introduction to Research in Nursing Science.

### **4.5.Bibliography and recommended resources**