

## 25906 - Research Methodology I

### Información del Plan Docente

Academic Year	2017/18
Faculty / School	301 - Facultad de Ciencias Sociales y Humanas
Degree	270 - Degree in Psychology
ECTS	6.0
Year	1
Semester	First Four-month period
Subject Type	Basic Education
Module	---

### **1.General information**

#### **1.1.Introduction**

#### **1.2.Recommendations to take this course**

#### **1.3.Context and importance of this course in the degree**

#### **1.4.Activities and key dates**

### **2.Learning goals**

#### **2.1.Learning goals**

#### **2.2.Importance of learning goals**

### **3.Aims of the course and competences**

#### **3.1.Aims of the course**

#### **3.2.Competences**

### **4.Assessment (1st and 2nd call)**

#### **4.1.Assessment tasks (description of tasks, marking system and assessment criteria)**

### **5.Methodology, learning tasks, syllabus and resources**

#### **5.1.Methodological overview**

#### **5.2.Learning tasks**

#### **5.3.Syllabus**

### **A. RESEARCH METHODS AND DESIGNS IN PSYCHOLOGY**

**1. Psychology, science and scientific method****2. The problem****3. The hypothesis****4. The variables****5. Participant, sampling and randomization****6. Research design****7. Essential aspects of experimental methodology**

## 1. Concept of experiment

## 2. Targets of experiment

## 3. MAX-MIN-CON principle

## 4. Causal inference as object

## 5. The problem of confounding

**8. Concept and categorization of validity**

## 1. The concept of validity

## 2. Categorization of validity from different perspectives

## 3. Internal validity

## 4. External validity

## 5. Construct validity

## 6. Statistical validity

**9. Scientific report**

**B. STATISTIC APPLIED TO PSYCHOLOGY****1. Univariate descriptive statistics**

1. Organization y representation of data

1. Frequency distribution

2. Graphical representations

1. Graphic representations of common use

2. Stem and leaf plot

2. Measures of position

1. Centiles o percentiles

2. Deciles

3. Other quantiles

1. Deciles

2. Quartiles

3. Equivalence between quantiles

3. Measures of central tendency

1. Arithmetic mean

1. Calculation in frecuency distribution

2. Properties of arithmetic mean

2. Median

3. Mode

#### 4. Comparison between measures of central tendency

#### 4. Measures of variation

##### 1. Measures of variation

##### 1. Variance and standard deviation

##### 2. Calculation and properties of variance

##### 3. Other measures of variation

##### 2. Graphical representations of variation

#### 5. Standard punctuation and derivative scales

##### 1. Standard punctuation

##### 2. Derivative scales

#### 6. Measures of asymmetry and kurtosis

##### 1. Measures of asymmetry

##### 2. Measures of kurtosis

## **2. Multivariate descriptive statistics**

### 1. Lineal correlation

#### 1. Graphical representations of a relation

#### 2. Quantification of a relation

##### 1. Properties of Pearson's correlation coefficient

##### 2. Assessment and interpretation of a correlation

#### 2. Lineal regression

## **25906 - Research Methodology I**

1. Lineal functions

2. Simple regression

1. Identification of a model: equations

2. Assessment of the model: regression coefficient

3. Application of the model

4. Some considerations about regression

**5.4.Course planning and calendar**

**5.5.Bibliography and recommended resources**