1. SUBJECT DESCRIPTION

This course is the first course about Methodology in Behavioural Sciences. You will understand psychological research basic concepts, the scientific method, and the types of designs typically used in psychology. We will work in the different types of designs from experimental to non-experimental methods using the statistics for understanding psychological research. We will see descriptive and inferential statistics in order to interpret significant and non-significant results, understanding the basis of psychological research in simple and complex designs. You will learn how to report results of a research using the standards in psychological research as well as how to show them to other scientists.

You will do your own design, analysis and scientific report both individually and in groups. Your will learn how to critically interpret others researches. Everything will be done through a combination of readings, class discussions and hands-on laboratory experience.

2. OBJECTIVES AND SKILLS

At the end of the course you will:

1. Know the different steps for doing a research in psychology as well as the ethical issues in the conduct of psychological research
2. Know how to use data bases to do a scientific search as well as to identify indexes for high quality research
3. Identify different types of designs: experimental, quasi-experimental, ex-post-facto, and observational and their characteristics and potential flaws
4. Decide what type of design would be better for certain objectives in terms of reliability and validity
5. Interpret your own and others results in terms of significant and non-significant results for simple and complex designs and determine potential research problems
6. Report your own results in a high quality way to other researchers and critically interpret others results in terms of methodology and statistical understanding
3. METHODOLOGY AND WEIGHTING

Lecture Classes

Lecture “interactive” classes, readings and class discussions will be used as basic teaching methodology during the semester. Lecture classes will be interactive as the teacher will make students to question about course topics, as well as the students can freely ask questions to the teacher or to other students within class discussions. We will also work all the topics through the book “Predictably Irrational: The Hidden Forces That Shape Our Decisions” by Dan Ariely. It is an easily reading book of Behavioural Economics essentially using experimental paradigms that would help the student to understand and critically read scientific research. Partial exams or final exam about the main concepts of the course will be 50% of the final evaluation.

Laboratory Classes

They may take place in the laboratory or in class and will be individual and group work. Practices during Laboratory Classes will be 10% of the final evaluation.

Doing a Research Work

A research must be done in groups (between 2 and 4 students). The students have to think of a psychological topic, design an experiment with two independent variables (one experimental and another non-experimental), collect and analyse data, and finally write an APA style report as well as a final Power Point oral presentation. It will be 40% of the final evaluation.

<table>
<thead>
<tr>
<th>Teaching Methodology</th>
<th>Weighting</th>
<th>Estimated time a student should dedicate to prepare for:</th>
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</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>(30)%</td>
<td>45 hours</td>
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<tr>
<td>Discussions</td>
<td>(20)%</td>
<td>30 hours</td>
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<tr>
<td>Exercises</td>
<td>(10)%</td>
<td>15 hours</td>
</tr>
<tr>
<td>Group work</td>
<td>(40)%</td>
<td>60 hours</td>
</tr>
<tr>
<td>Other Individual studying</td>
<td>(0)%</td>
<td>0 hours</td>
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<tr>
<td>TOTAL</td>
<td>100%</td>
<td>150 hours are required for 6 ECTS course (30 sessions); 75 hours, for 3ECTS (15 sessions)</td>
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4. CONTENT

PART 1: INTRODUCTION


PART 2: REVIEWING THE RESEARCH PROCESS

Measurement concepts, types of variables. Reliability and Validity as an essential part of the research process. Types of reliability and validity. Types of designs: experimental, quasi-experimental, ex-post-facto designs, descriptive designs (observational and survey research) and qualitative designs.
PART 3: ADVANCED EXPERIMENTAL DESIGNS


PART 4: ADVANCED QUASI-EXPERIMENTAL DESIGNS


PART 5: EX-POST-FACTO DESIGNS


PART 6: THE SCIENTIFIC REPORT

APA style and how to do a high quality scientific report. Scientific writing. Title, abstract, methods, results and discussion. Tables and Figures. References in and out the main text. Paper example APA style. Deciding the journal to send the paper. Conferences and presentations: poster and power point presentations. A High quality talk in science.

5. EVALUATION SYSTEM (ORDINARY AND EXTRAORDINARY)

Your final grade in the course will be based on both individual and group work of different characteristics that will be weighted in the following way:

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<thead>
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<tbody>
<tr>
<td>A.</td>
<td>Laboratory Classes</td>
<td>10%</td>
</tr>
<tr>
<td>B.</td>
<td>Research work</td>
<td>40%</td>
</tr>
<tr>
<td>C.</td>
<td>Final Exam</td>
<td>50%</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>100%</td>
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</tbody>
</table>

A. LABORATORY CLASSES

Practices done during laboratory classes as well as participation will be evaluated and will be the 10% of the final grade.
B. RESEARCH WORK

It will be the **40%** of the final grade. As previously mentioned, a research must be done in groups (between 2 and 4 students). The students have to think of a psychological topic, design an experiment with two independent variables (one experimental and another non-experimental), collect and analyse data, and finally write an APA style report as well as a final Power Point oral presentation.

C. FINAL EXAM

At the end of the semester a final multiple choice exam including theoretical and practice questions about a given research will take place. It will be the **50%** of the final grade. Satisfactory partial exams during the course could be an alternative to final exam.

5.1. RETAKE POLICY

Each student has **4 chances** to pass any given course distributed in two consecutive academic years (regular period and July period).

Students who do not comply with the 70% attendance rule will lose their 1st and 2nd chance, and go directly to the 3rd one (they will need to enrol again in this course next academic year).

Grading for retakes will be subject to the following rules:

- Students failing the course in the first regular period will have to do a retake in July (except those not complying with the attendance rules, which are banned from this possibility).
- Dates and location of the July retakes will be posted in advance and will not be changed. Please take this into consideration when planning your summer.
- The retake will consist on research work presentation and exam.

- July retake: The retake will consist on research work presentation and exam.
- Retake in the ordinary period: The retake will consist on research work presentation and exam.

- The grading criteria for the retakes are 50% research work presentation and 50% exam.
- The maximum grade that a student may obtain in the retake will be 8 out of 10.

6. USE OF ELECTRONIC DEVICES IN CLASS

This subject does not require the use of a laptop in class; nevertheless, if you want to bring your laptop, please contact your professor.

7. OFFICE HOURS

**Office hours**: Tuesday from 8:30 to 9:30 and from 14:00 to 15:00.