Psychology and Research in Madrid

COURSE DESIGNATOR MAD 4901
NUMBER OF CREDITS 3
LANGUAGE OF INSTRUCTION ENGLISH
CONTACT HOURS 1.5

INSTRUCTOR/COORDINATOR Ksenija Jovanovic, PhD.

DESCRIPTION
The Psychology and Research in Madrid Course aims to offer an opportunity for undergraduates to gain a meaningful research experience while earning course credit. Students will be required to commit at least 10 hours per week during which, they will follow a different format than typical classroom-based courses and will be working hands-on in one of the Foundation-affiliated research labs. The course has been designed to be research and theory oriented in order to teach students that, like in all the natural sciences, ideas in psychology need to be critically evaluated based on the weight of the research evidence. Thus, we put emphasis on critical thinking and encourage students to exercise analytical, independent and quantitative thinking on scientific concepts and not only memorize the material presented in the class. This is not a text book course and students would be expected to read and discuss assigned readings, write reports, listen to and give presentations about current research. A short description of research sites collaborating in this course can be found on the web site of the UMN Learning abroad center.

COURSE OBJECTIVES
- To help students develop or improve critical thinking skills
- To teach students how to perform hypothesis-driven research
- To search and review scientific literature
- To learn how to collect research data
- To analyze and interpret results
- To improve scientific writing and communication skills
- To conduct oneself successfully as part of a collaborative research team

METHODOLOGY
We will combine the research internship with one class session per week. Class sessions will include short introductory lectures on a weekly subject, analysis and reviews of scientific articles, lectures, power point presentations, written reports and discussions of required readings. Sessions will be conducted in English, but as the course progresses, the instructor will gradually introduce some useful scientific vocabulary in Spanish. The students are expected to have read the required material before class and to be prepared to participate
in integrative and meaningful discussions. Students may be tested on all material covered in lectures and in research labs, as well as on additional required readings that may not be covered in class. All indicated assignments are to be completed in timely fashion and respecting deadlines.

**COURSE READINGS**
The readings required for the course include original research articles as well as the popular press and internet articles on a broad range of Psychology and brain themes. These articles will be assigned throughout the course and e-mailed by the instructor before the class. Students will be offered to choose from the existing bibliography that accompanies the major themes of the course (please see the course schedule below) but also to create a bibliography focused on their research projects.

**SUMMARY OF HOW GRADES ARE WEIGHTED**
Each student will be graded individually based on his/her class activities and research internship according to the following criteria:

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>PERCENTAGE OF THE TOTAL GRADE</th>
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<tbody>
<tr>
<td>Class participation</td>
<td>20%</td>
</tr>
<tr>
<td>Individual presentation</td>
<td>20%</td>
</tr>
<tr>
<td>Written research abstract</td>
<td>15%</td>
</tr>
<tr>
<td>Final research project presentation</td>
<td>30%</td>
</tr>
<tr>
<td>Research participation/involvement</td>
<td>15%</td>
</tr>
<tr>
<td>Overall grade</td>
<td>100%</td>
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**CRITERIA FOR GRADING AND GRADING STANDARDS**

<table>
<thead>
<tr>
<th>Grading Rubric</th>
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<tr>
<td>93-100% Achievements are outstanding relative to the level necessary to meet course requirements.</td>
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<tr>
<td>90-92% Achievement that is significantly above the level necessary to meet course requirements.</td>
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<tr>
<td>87-89% 83-86%</td>
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<tr>
<td>80-82% 77-79%</td>
</tr>
<tr>
<td>73-76%</td>
</tr>
<tr>
<td>70-72% 67-69%</td>
</tr>
<tr>
<td>60-66%</td>
</tr>
<tr>
<td>0-59% Represents failure (or no credit) and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I.</td>
</tr>
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**Class Participation**
All classes (including lectures, activities, presentations, etc.) require the student’s active participation. In order to receive a high grade the student must be prepared in advance and make meaningful observations, comments or questions that prove his/her comprehension and interest in the subject. If needed, one-on-one sessions with students will be available.
Research Participation/involvement

Students are expected to spend a minimum of 10 hours per week on their assigned lab projects. Their workload and the specific responsibilities may vary depending on the type and phase of the project and will be outlined by the research mentor at the beginning of the semester. As research process and its success depend on many factors, students should be prepared to contribute to new tasks that may come up during the semester.

- As research assistants students will have following responsibilities:
  1. Participate in the assigned research project. This includes: finding, reading and discussing published literature in the field to place the current project in a context of past and ongoing research; collect, analyze and evaluate data, and write short reports on the findings. These tasks will be done under supervision and in collaboration with the researcher, a postdoc/PhD student in the lab.
  2. Attend and participate in weekly/monthly meetings and journal clubs at the research lab.
  3. Participate in special events, visits and seminars that are set at the beginning of the semester.
  4. Keep an updated journal and submit it in person or via email every week to the class instructor. The journal should describe students’ weekly research activities and experiences at the research placement, as well as observations their daily life in Madrid.
  5. Make a final oral and/or written presentation of the research they are involved in, depending on what is agreed with their research mentor and the course instructors.

Final Research Project Class Presentation

The final evaluation of the course will consist of a power point presentation about the research internship the students carried out and a short written abstract that describes it concisely. Students are required to email the short abstract (250 words max) to the instructor one week before the presentation and to hand it in to the rest of the students just before the presentation. The presentations should be ten minutes long and students are allowed to use any kind of available support to execute it.

- Presentation structure:
  1. Abstract
  2. Hypothesis
  3. Introduction
  4. Material & Methods
  5. Discussion
  6. Conclusions
  7. Bibliography

- The written abstract must be submitted on Monday, April 16
- On Monday, April 23 each student will present to the class a summary of his/her research.

IMPORTANT. No papers or requirements will be accepted after due dates.

CLASS ATTENDANCE

Regular attendance and punctuality are mandatory in order to earn full marks. Nevertheless, students are allowed ONE UNJUSTIFIED absence. From that one on, each absence will affect the final grade. The
attendance will be taken and instructor may deny the access to the classroom if the student arrives more than 10 minutes after the class has started. In the case of absences, it is the student’s responsibility to find out what information was given in class including any announcements made.

CLASS SCHEDULE (Note: This schedule is subject to change)

Week 1 - Course introduction and basic research concepts
Week 2 – Introduction to research: definition, purpose and examples
Week 3 - What is the scientific method? Definition, steps and process
Week 4 - Research methods – basic research
Week 5 - Research methods – human research
Week 6 - Translational research and clinical trials
Week 7 - Data collection and analysis
Week 8 - Let’s design a research project: steps from A to Z
Week 9 - Ethical and legal issues in research
Week 10 - Neural networks as anatomical substrate for human behavior and psychological disorders
Week 11 - Modern techniques in diagnosing psychological disorders
Week 12 - Scientific communication: presentations, abstracts, posters and peer reviewed articles
Week 13 - Scientific projects and funding

ACADEMIC BEHAVIOUR
The Fundación Ortega-Marañón expects all the students to complete coursework responsibilities with fairness and honesty. Plagiarizing and cheating on assignments or examinations will be considered scholastic dishonesty. Within this course any student with such behavior can be assigned an F. No cellular phones may be connected during classes or any other Program Activities.

STUDENTS WITH DISABILITIES
Students in need of assistance have to fill a form at their Home University in order to help us make the Fundación facilities suitable to their needs. In the first class, students must inform the instructor in order to make appropriate arrangements.

DISCLAIMER
The class schedule and material is subject to change. The placement in one of the participating labs will be available on first come first serve basis. Unlike at the US universities, the practice sites are scattered within Madrid’s metropolitan area and some of them in nearby Toledo, so the students will need to use the public transportation to get to them. The FOGM staff will provide students with detailed information about the public transportation and if necessary accompany them to their labs.