COURSE GUIDE (∞)
RESEARCH PRACTICAL TRAINING

* Please ensure that you use the official UGR nomenclature and terminology (ES-EN) available in UGRTerm for the names of programmes, courses, faculties/schools, departments, competences/skills, teaching methodology, etc.

SEMESTER	CREDITS (ECTS)	TYPE	MODE OF DELIVERY	LANGUAGE(S) OF INSTRUCTION
2nd	15	Elective	Face-to-face / Blended / Distance	Spanish and English

MODULE	Practical Training
SUBJECT	Research Practical Training
CENTRE / FACULTY / SCHOOL RESPONSIBLE FOR THE PROGRAMME	International School for Postgraduate Studies (EIP)
MASTER'S DEGREE	Master in Cognitive and Behavioral Neuroscience
FACULTY / SCHOOL	Mind, Brain and Behavior Research Center (CIMCYC)

TEACHING STAFF[1]

María Ruz

CONTACT DETAILS	Dept. Experimental Psychology. School of Psychology. Campus de Cartuja s/n, 18071 Granada. Office 315 (2nd floor), 958247876, mruz@ugr.es
OFFICE HOURS	http://directorio.ugr.es/static/PersonalUGR/*/show/5b691a297a6fbd3eb32d892de0be5376 The platform and link for the online meetings will be communicated to students after request by email

GENERAL AND SPECIFIC COMPETENCES

GENERAL COMPETENCES

CG2 - Acquisition of practical knowledge in general psychological research techniques and in the specific methods and techniques of Neuroscience and Neuropsychology.

CG3 - Acquisition of practical knowledge in techniques derived from Cognitive Neuroscience and Behavior such as Neuropsychological assessment and intervention.

CB6 – Understanding of knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context

CB7 - That the students know how to apply the acquired knowledge and their ability to solve problems in new or other environments within broader (or multidisciplinary) contexts related to their area of study

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[1] Consulte posible actualización en Acceso Identificado > Aplicaciones > Ordenación Docente

(∞) Esta guía docente debe ser cumplimentada siguiendo la "Normativa de Evaluación y de Calificación de los estudiantes de la Universidad de Granada" (http://secretariageneral.ugr.es/pages/normativa/fichasugr/ncg7121/!)

CB8 - That the students are able to integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.

CB9 - That the students know how to communicate their conclusions and the latest knowledge and reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way

CB10 - That the students possess the learning skills that allow them to continue studying in a largely self-directed or autonomous manner.

SPECIFIC COMPETENCES

CE1 - Ability to use research and evaluation techniques in psychology, neuropsychology and neuroscience.

CE2 - Ability to acquire and analyze data in psychology, neuropsychology and neuroscience.

CE3 - Ability to make critical judgments of methodological quality in both basic and applied research studies (experimental control, used designs, etc.).

CE4 - Acquisition of knowledge about psychological processes and their neural bases.

CE5 - Knowledge of the main methodologies in cognitive, emotional and behavioral neuroscience.

TRANSVERSAL COMPETENCES

T1 - That the students possess the learning skills that allow them to continue studying in a self-directed or autonomous way. To do this, they will acquire skills to search bibliographic sources and to critically analyze and organize scientific literature on specific topics.

T2 - That the students know how to communicate their conclusions -and the knowledge and ultimate reasons that support them- to specialized and non-specialized audiences in a clear and unambiguous way; This is reflected in the acquisition of oral and written exposition skills of theoretical and research works.

OBJECTIVES OR LEARNING OUTCOMES (ACCORDING TO THE MASTER'S PROGRAMME VALIDATION REPORT)

The student will know / understand:
- In general, the process of research in Cognitive and Behavioral Neuroscience.
- In depth, some research technique/s in Cognitive and Behavioral Neuroscience.

The student will be able to:
- Carry out a bibliographic search and analysis on a specific topic of Cognitive and Behavioral Neuroscience.
- Ask a research question to advance knowledge in Cognitive and Behavioral Neuroscience.
- Plan an investigation to test a set of hypotheses.
- Carry out the research (programming the experiment, collecting and analyzing data).

BRIEF DESCRIPTION OF THE COURSE CONTENT (ACCORDING TO THE MASTER'S PROGRAMME VALIDATION REPORT)

Acquisition of practical skills related to research in specific experiments within the field of Cognitive and Behavioral Neuroscience

SYLLABUS

- Bibliographic search and analysis on a specific topic to investigate.
- Hypotheses statement.
- Research planning and programming.
- Data acquisition.
- Data analysis.
- Data interpretation

Research lines (research supervisor) offered for the course 2020-21
- Characterization of the brain mechanisms of preparation (María Ruz)

- Sex hormones, contraceptives, cognitive processes (Antonio Bernal)
- How to learn words in a second language (Pedro Macizo)
- Numerical cognition (Pedro Macizo)
- Developmental psychobiology in rodents (Milagros Gallo & Fernando Gámiz)
- Early development of attention and self-regulation (Charo Rueda)
- Risk perception and risk taking in different contexts: Impulsivity, moral and affective effects (Antonio Cándido & Andrés Catena)
- The psychological processing of traumatic events (Andrés Catena)
- Bilingualism, second language learning and cognitive control (Teresa Bajo & Daniela Paolieri)
- The role of anxiety in interpersonal decision-making (Alberto Acosta & María Ruz)
- The effect of retrospective attention on working memory (Fabiano Botta)
- Conceptual metaphors in mental representation (Julio Santiago)
- Eye-gaze vs. arrows: A comparison to study social attention (Juan Lupiáñez & Andrea Marotta)
- Attentional networks, and arousal and executive vigilance (Elisa Martín Arévalo, Fabiano Botta & Juan Lupiáñez)
- Endogenous and exogenous attentional orienting (Elisa Martín Arévalo, Fabiano Botta & Juan Lupiáñez)
- Emotion as a perceptual regulator: Fear and disgust as modulators of stimulus detection and discrimination (Juan Lupiáñez & Alberto Acosta)
- Motivation, anxiety and cognitive control: The role of the affective content and learning about uncertainty (Juan Lupiáñez, Alberto Acosta & Marcin Bukowski)
- Emotional response in addictive processes: Studies from animal models (Ignacio Morón)
- Memory and emotion (Teresa Bajo & Alejandra Marful)
- Interference inhibition and memory control (Teresa Bajo & Alejandra Marful)
- The hazard prediction and risk estimation test to evaluate the profile of the safe driver (Cándida Castro)
- Numerical cognition and emotion (Alberto Acosta & Pedro Macizo)
- Incentive salience and sensitivity to outcome revaluation in human action control and selection: Individual differences (Felisa González)
- Text comprehension processes and cognitive control (Ana Pérez & Teresa Bajo)
- Light for sleep (Ángel Correa)
- Analysis of learning by stimulus exposure: Theoretical and practical implications (Isabel de Brugada)
- Perceptual learning in animals and humans: Comparison and salience modulation (Isabel de Brugada)
- Neural bases of phenomenal and access consciousness (Ana Chica)
- The role of gray and white matter in attention and consciousness (Ana Chica & Elisa Martín Arévalo)
- Emotion regulation in gambling disorder (José C. Perales)
- Physical exercise, brain and cognition (Daniel Sanabria)
- Neuropsychology and activities of daily living (M. Jesús Funes)

REQUIRED AND RECOMMENDED READING

- Amat, O. y Rocafort, A. (2017) Cómo investigar: Trabajo de final de grado, tesis de máster, tesis doctoral y otros trabajos de investigación. Barcelona : Profit.
- del Barrio Alba, A. (2018) El informe neuropsicológico. Madrid: Síntesis.
- Ruz M, Correa Á, Funes MJ, Macizo P, Sanabria D, Vaquero JMM (2011) Manual docente para investigadores principiantes en Psicología Experimental y Neurociencia Cognitiva. Universidad de Granada. http://www.ugr.es/~mruz/pdfs/ManualPrincipiantesExp.pdf

USEFUL LINKS (OPTIONAL)

https://jasp-stats.org/
https://osf.io/
https://investigacion.ugr.es/pages/etica

TEACHING METHODOLOGY

Discussion and debate sessions. Solving problems in specific fields of scientific research. Laboratory training. Simulation exercises. Carrying out individual work. All these activities will be organized according to the following axes:

- Student work in the laboratories (250 hours, in person sessions)
- Self-supervised student work (75 hours)
- Tutoring (50 hours)

The teaching methodology and evaluation will be adapted to students with specific needs (NEAE), in accordance with Article 11 of the Regulations for the evaluation and qualification of students of the University of Granada, published in the Official Bulletin of the University of Granada, nº 112, November 9, 2016.

ASSESSMENT (EVALUATION INSTRUMENTS, EVALUATION CRITERIA, PERCENTAGE OF FINAL MARK, ETC)

ORDINARY ASSESSMENT

The evaluation will take place July. This will be done by the supervisor, taking into account:

- Final evaluation of reports, etc. made during the internship period (10%)

- Qualitative evaluation of the tutor of the practices (90%), according to the following axes:

> • The student is meticulous, plans the tasks in advance, systematically reviews the work s/he does and complies with the schedule (15%)

> • The student finds and applies solutions to unforeseen situations (e.g. availability of resources or participants) (10%)

> • S/he is autonomous (able to find resources and learn to work without supervision) (15%)

> • S/he has an adequate treatment towards the participants or research animals (10%)

> • S/he works well in a team and responds appropriately to the feedback from others (10%)

> • S/he complies with the guidelines of the University Ethics Commission (10%)

> • S/he recognizes and avoids questionable research practices (10%)

> • S/he has learned to apply the relevant research techniques (20%)

EXTRAORDINARY ASSESSMENT

In the subjects "External Practices" or "Practicum" of any degree, the student who uses this modality of final single assessment must, however, perform such practices according to the schedule established in the Teaching Guide of the subject.

The evaluation will take place September and will follow the same structure as the ordinary call. Due to the fully practical nature of this course, there is no possibility to substitute the evaluation with a final exam or written assignment.

DESCRIPTION OF THE EXAMS/TESTS THAT WILL FORM PART OF THE SINGLE FINAL ASSESSMENT "*EVALUACIÓN ÚNICA FINAL*" (AN ASSESSMENT METHOD THAT ONLY TAKES A FINAL EXAM INTO ACCOUNT) AS ESTABLISHED IN THE UGR ASSESSMENT POLICY AND REGULATIONS)

In the subjects "External Practices" or "Practicum" of any degree, the student who uses this modality of final single assessment must, however, perform such practices according to the schedule established in the Teaching Guide of the subject.

Due to the fully practical nature of this course, there is no possibility to substitute the evaluation with a final exam or written assignment.

SCENARIO A (ON-CAMPUS AND REMOTE TEACHING AND LEARNING COMBINED)

TUTORIALS

TIMETABLE (According to Official Academic Organization Plan)	TOOLS FOR TUTORIALS (Indicate which digital tools will be used for tutorials)
The tutoring schedules can be checked in the lecturer's link in the UGR Directory linked above.	The information is listed at the beginning of this guide

MEASURES TAKEN TO ADAPT TEACHING METHODOLOGY

The research supervisor will provide the student with guidelines on the tasks to be carried out by telematics means, using email and / or videoconference. The same means will be used by the supervisor to receive the results of the student's work, and to carry out the necessary tutorials.

The section corresponding to "Development of research" will be modified as required by the sanitary situation. As a substitute for the collection of data in laboratories in person (when appropriate), (1) previous similar data from the research group, (2) pilot data collected from their colleagues, or (3) simulated data (by participant and experimental condition) provided by the supervisor will be used to carry out the appropriate statistical analyses.

MEASURES TAKEN TO ADAPT ASSESSMENT (Instruments, criteria and percentage of final overall mark)

Ordinary assessment session

The evaluation criteria and their weights will be modified not to take into account the items that evaluate the in-person data collection in the laboratory. In the event that sanitary recommendations make impossible to carry out this activity, the two items that reflect this aspect as reflected in the original guide (S/he has a treatment towards the participants or appropriate research animals and Sh/e strictly complies with the guidelines of the University ethics committee) will not be evaluated, and their weight will be distributed equally among the rest of the items. This modification is reflected in the following list:

- The student is meticulous, plans the tasks in advance, systematically reviews the work s/he does and complies with the schedule (18.3%)
- The student finds and applies solutions to unforeseen situations (e.g. availability of resources or participants) (13.3%)
- S/he is autonomous (able to find resources and learn to work without supervision) (18.3%)
- S/he works well in a team and responds appropriately to the feedback from others (13.3%)
- S/he recognizes and avoids questionable research practices (13.3%)
- S/he has learned to apply the relevant research techniques (23.5%)

Extraordinary assessment session

The strategy will be the same as in the ordinary assessment.

Single final assessment

Due to the fully practical nature of this course, there is no possibility to substitute the evaluation with a final exam or written assignment.

SCENARIO B (ONCAMPUS ACTIVITY SUSPENDED)

TIMETABLE (According to Official Academic Organization Plan)	TOOLS FOR TUTORIALS (Indicate which digital tools will be used for tutorials)

The tutoring schedules can be checked in the lecturer's link in the UGR Directory linked above.	The information is listed at the beginning of this guide

MEASURES TAKEN TO ADAPT TEACHING METHODOLOGY
The strategy will be the same as in the previous scenario.

MEASURES TAKEN TO ADAPT ASSESSMENT (Instruments, criteria and percentage of final overall mark)
Ordinary assessment session
The strategy will be the same as in the previous scenario.
Extraordinary assessment session
The strategy will be the same as in the previous scenario.
Single final assessment
The strategy will be the same as in the previous scenario.