



Academic year	2012-13
Subject	10534 - Cognitive Psychophysiology
Group	Group 1, 1S
Teaching guide	A
Language	English

Subject identification

Subject	10534 - Cognitive Psychophysiology
Credits	1.6 in-class (40 hours) 5.4 distance (135 hours) 7 totals (175 hours).
Group	Group 1, 1S
Teaching period	1st semester
Teaching language	English

Lecturers

Lecturers	Timetable for student attention					
	Starting time	Finishing time	Day	Start date	Finish date	Office
Pedro José Montoya Jiménez pedro.montoya@uib.es	17:00h	18:00h	Tuesday	25/09/2012	30/07/2013	IUNICS 015

Degrees where the subject is taught

Degree	Character	Academic year	Studies
Master's Degree in Neurosciences	Optional		Postgraduate degree

Contextualisation

Cognitive Neuroscience is a subject devoted to the study of brain, behaviour and cognition in humans taking into account the most recent advances in neuroimaging techniques. A central feature of the course is the exploration of brain mechanisms involved in psychological processes such as emotion, learning, memory, and executive functions. The starting point of the course is the discussion about the impact of the new neuroimaging techniques for the study of the brain and behaviour. You'll then move on to examine the neural basis of each psychological process and the most relevant scientific findings by reading and discussing recently published papers in the field. You'll also have the opportunity to develop your skills for further postgraduate study or as grounding if you intend to undertake research in Cognitive Neuroscience.

Requirements





Recommendable

You should expect to be reading original research articles as well as textbooks in English. It is recommended to have basic knowledge on Statistics.

Skills

Specific

1. To be able to demonstrate an understanding of cognitive processes from neuroscientific perspective.
2. To critically assess primary literature about the study of cognition using neuroimaging techniques.
3. To prepare an extended and original paper that summarizes a particular aspect of the involvement of brain in cognitive processes.

Generic

1. To develop skills of critical analysis and evaluation to assess how experimental paradigms are adequate to explore scientific problems.
2. To develop advanced skills you will need if you intend to undertake research.

Content

Theme content

- Unit 1. Methods and research techniques in Cognitive Neuroscience
- Unit 2. Emotion and the brain
- Unit 3. Neuropsychology of memory
- Unit 4. Plasticity in adults and patients with brain damage
- Unit 5. Brain correlates of executive functions

Teaching methodology

In-class work activities

Modality	Name	Typ.Gr.	Description
Theory classes	Lectures	Large group (G)	To present the major research lines in the topic. Students will be encouraged to read and discuss several papers during the course.
Practical classes	Lab activities	Medium group (M)	Undergraduate students will work through a set of exercises that show how to record and analyze EEG data.





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Modality	Name	Typ.Gr.	Description
			Master students will be strongly encouraged to discuss a research design, to collect data and to prepare a poster or an oral presentation of the results.
ECTS tutorials	ECTS tutorials	Medium group (M)	To explain the major points of the syllabus and to discuss difficulties regarding the learning process and the preparation of the research paper. Sessions will be scheduled at the beginning and during the course.
Assessment	Final exam	Large group (G)	Students will be given two questions to answer in oral form.
Assessment	Oral presentation of lab work	Medium group (M)	Presentation of the research project.

Distance education work activities

Modality	Name	Description
Individual self-study	Preparing and writing assignments and reports	The research paper should be made up of six sections: abstract, introduction, method section, results, discussion, and reference section (15-20 pages).
Individual self-study	Studying class topics	To learn the main concepts.
Group self-study	Preparing lab activities	To discuss a research design, to collect data and to prepare a poster or an oral presentation of the results.

Riscs específics i mesures de protecció

Les activitats d'aprenentatge d'aquesta assignatura no comporten riscos específics per a la seguretat i salut de l'alumnat i, per tant, no cal adoptar mesures de protecció especials.

Workload estimate

Modality	Name	Hours	ECTS	%
In-class work activities		40	1.6	22.86
Theory classes	Lectures	20	0.8	11.43
Practical classes	Lab activities	15	0.6	8.57
ECTS tutorials	ECTS tutorials	2	0.08	1.14
Assessment	Final exam	1	0.04	0.57
Assessment	Oral presentation of lab work	2	0.08	1.14
Distance education work activities		135	5.4	77.14
Individual self-study	Preparing and writing assignments and reports	50	2	28.57
Individual self-study	Studying class topics	40	1.6	22.86
Group self-study	Preparing lab activities	45	1.8	25.71
Total		175	7	100





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At the beginning of the semester a schedule of the subject will be made available to students through the UIBdigital platform. The schedule shall at least include the dates when the continuing assessment tests will be conducted and the hand-in dates for the assignments. In addition, the lecturer shall inform students as to whether the subject work plan will be carried out through the schedule or through another way included in the Campus Extens platform.

Student learning assessment

The continuous assessment approach entails the systematic study of the subject over the whole semester. Therefore, class attendance and active participation are considered of special importance. If you will not be able to have at least 80% attendance for the course, please contact the teacher during the first week.

The grade in this course will depend on your student status (undergraduate Psychology student or Master student).

Final grades will be based on the combination of all the above components.

For all the writing assignments in the course, you will be required to use APA format.

Please note that all work you submit for evaluation must be your own work. Honesty in our academic work is vital, and we will not knowingly act in ways which erode that integrity. Accordingly, we pledge not to cheat, nor to tolerate cheating, nor to plagiarize the work of others.

Lectures

Modality	Theory classes
Technique	Other methods (Non-recoverable)
Description	To present the major research lines in the topic. Students will be encouraged to read and discuss several papers during the course.
Assessment criteria	The student should write a 1-2 pages summary of the readings discussed in each unit. Assignments are due by the beginning of the next unit. Each assignment should present the summary in a clear and concise form, demonstrating knowledge, comprehension, and synthesis of the topic. Grading will be based on following criteria: - Concise statement of the rationale, purpose, and structure (max. 3 points) - Theoretical framework and core constructs clearly identified (max. 3 points) - Clear and logical conclusions drawn from the readings with well-founded recommendations for further research and some creative thought (max. 4 points).

Percentage of final qualification: 25% following path A

Lab activities

Modality	Practical classes
Technique	Student internship dissertation (Non-recoverable)
Description	Undergraduate students will work through a set of exercises that show how to record and analyze EEG data. Master students will be strongly encouraged to discuss a research design, to collect data and to prepare a poster or an oral presentation of the results.
Assessment criteria	- Abstract of 150-200 words (max. 1 points) - Introduction with presentation of general theoretical area of interest, adequate review of the relevant literature, and clear research question (max. 2 points) - Methods with participant, procedure and recording information (max. 1 points) - Results with appropriate and detailed statistical tests (max. 2 points) - Discussion with overall statements supporting or not the research question,





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possible problems or limitations, implications of study's findings and suggestions for further research (4 points)

Percentage of final qualification: 30% following path A

ECTS tutorials

Modality	ECTS tutorials
Technique	Learning file (Non-recoverable)
Description	To explain the major points of the syllabus and to discuss difficulties regarding the learning process and the preparation of the research paper. Sessions will be scheduled at the beginning and during the course.
Assessment criteria	Attendance

Percentage of final qualification: 10% following path A

Final exam

Modality	Assessment
Technique	Extended-response, discursive examinations (Recoverable)
Description	Students will be given two questions to answer in oral form.
Assessment criteria	Students will be given two questions to answer in oral form.

Percentage of final qualification: 20% following path A

Oral presentation of lab work

Modality	Assessment
Technique	Oral tests (Non-recoverable)
Description	Presentation of the research project.
Assessment criteria	- Content (knowledge of subject material, ability to answer questions) (max. 6 points) - Organization (structure of presentation, use of visual material) (max. 2 points) - Delivery style (timing, maintenance of audience interest) (max. 2 points)

Percentage of final qualification: 15% following path A

Resources, bibliography and additional documentation

Basic bibliography

Purves, D., Brannon, E.M., Cabeza, R., Huettel, S.A., LaBar, K.S., Platt, M.L., & Woldorff, M.G. (2008). Principles of Cognitive Neuroscience. Sinauer Associates, Inc.

Complementary bibliography

Gazzaniga, M.S., Ivry, R.B., & Mangun, G.R. (2008). Cognitive Neuroscience: The Biology of the Mind (Third Edition). W.W. Norton & Co.

Other resources





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A selection of papers to be discussed will be given each week.

