



**Universiteit
Utrecht**

Helmholtz  Instituut

Cognitive Neuropsychology: From Patients to Functional Models

Coordinators: Prof. Dr. Albert Postma and Dr. Teuni ten Brink, Experimental Psychology, Helmholtz Institute, Utrecht University

Summerschool 2022 – beginning and advanced PhD student course. As an advanced training in Cognitive Neuropsychology, the course aims to teach PhD students how to collect and interpret patient data in order to test cognitive theories and build cognitive models. The emphasis will be on 'doing research'. Candidates will get an acquaintance with standard neuropsychological testing, will be shown examples of patients cases, case statistics and will build, run and analyse their own experiment. A special training in reviewing and reporting is included.

Cognitive Neuropsychology studies the functional disorders people suffer after brain injury in order to construct and test formal models of cognitive functioning. It is strongly driven by fundamental theory but also can have implications for clinical diagnosis and therapy. Cognitive Neuropsychology gives invaluable insights in how the human mind works and forms an indispensable instrument in the modern Cognitive Neuroscience toolbox.

Cognitive Neuropsychology has strongly been inspired by fascinating reports of patients such as Broca's mister 'Tan', who could only utter a single word after frontal lobe ailment, and the tragic case of Henry Molaison who, following medio-temporal lobe surgical removal to treat epilepsy, could no longer remember any new events happening in his life. Studies with comparable groups of patients have further stimulated the field of cognitive neuropsychology

The course spans 10 full days of lectures and practical work, in which cognitive neuropsychology research examples and methods are discussed. Students have to do a

short research project, including setting up and trying out their own cognitive neuropsychology experiment, and complete a number of writing assignments. Senior, international cognitive neuropsychologists give lectures and supervision.

The course will address history and methodology of cognitive neuropsychology research; statistical techniques; examinations in large clinical groups; disorders such as topographical amnesia, visuospatial neglect; amnesia.

After this course, PhD candidates:

- a) will have gained new insights and skills in how to conduct cognitive neuroscience research,
- b) are able to read, evaluate and integrate in their own research, recent literature from the field of cognitive, clinical and applied neuropsychology, and
- c) can directly strengthen their own PhD projects with new analytic and experimental approaches.

Schedule

The schedule will be updated closer to the starting date, including recommended literature. A typical day starts with a two - three hours lecture in the morning, followed by an assignment for group work. There is opportunity to consult with the course tutors during this assignment. The day closes with presentations, plenary discussions or self-study and writing activities.

Active student participation: Students have to conduct their own mini cognitive neuropsychology research project, requiring them to think further about the ins and outs of patient research, to design new experiments or make new combinations of neuropsychological tests, and to write a research paper and review other papers from the domain of cognitive neuropsychology. Active participation is thus highly stimulated.

This is a hybrid course. In principle, it is fully taught on location in the city of Utrecht. Attending online only is also a possibility. For the social part and the experience to be at Utrecht University we recommend to come to campus, but this is no requirement.

Certain details of the schedule might slightly change prior to the start of the course. Notice at the times during which no central meeting has been planned, you can work either on your own (reading, writing, analysing) or plan a meeting with your own group.

Day 1	Prof. Albert Postma	4-7-2022
10-12am	Lecture: The fascinating cases of Monsieur Tan and H.M.: An Introduction to cognitive neuropsychology	
1-3.30pm	Group work	
3.30-5pm	Seminar	
Day 2	Dr. Teuni ten Brink	5-7-2022
10-12am	Lecture: Replication crisis in Neuropsychology - rehabilitation of visuospatial neglect	
Day 3	Prof. Muireann Irish	6-7-2022
9-11am	Lecture: The future of memory – what have we learned from the dementias?	
Day 4	Prof. Muireann Irish	7-7-2022
9-11am	Consultancy time with Prof. Muireann Iris.	
1-5pm	Group work	
	<i>[optional: Helmholtz Lecture of Prof Muireann Irish at 4-5pm]</i>	
Day 5	Prof. Muireann Irish	8-7-2022
9-11am	Lecture: Try to see it my way - Social cognition in frontotemporal dementia	
1-5pm	Group work	
Day 6	Prof. Olaf Blanke	11-7-2022
10-12am	Lecture: Multisensory and cognitive mechanisms of bodily self-consciousness	
1-3.30pm	Group work	
3.30-5pm	Consultancy time with Prof. Olaf Blanke.	
Day 7	Prof. Olaf Blanke	12-7-2022
10-12am	Lecture: Complex hallucinations and cognitive impairments in Parkinson's disease	
1-2pm	Group work	

