

# Doktor znanosti/doktorica znanosti s področja vedenjske in kognitivne nevroznanosti

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## Selected qualifications

### Name of qualification

Doktor znanosti/doktorica znanosti s področja vedenjske in kognitivne nevroznanosti

### Translated title (no legal status)

Doctor of Philosophy in the field of behavioural and cognitive neuroscience

### Type of qualification

Doktorat

### Category of qualification

Izobrazba

### Type of education

Doctoral education

### Duration

3 years

### Credits

180 credits

## Admission requirements

- A completed second-cycle (Bologna) study programme; or
- a completed four-year academic undergraduate programme adopted before 11 June 2004; or
- a completed professional higher education programme adopted before 11 June 2004, if before enrolment the candidate has also completed a study programme leading to a specialisation; course units totalling 30 credits are defined for these candidates before enrolment in the programme (candidates must acquire knowledge in the fields of psychology and computer science, by passing the following examinations: Cognitive Psychology (5 credits), Psychometry (5 credits), Physiology (5 credits), Statistics and Methodology (5 credits), Basics of Computer Science (5 credits), English Language (5 credits)); or
- a completed study programme leading to professions regulated by EU directives, or another integrated master's degree programme consisting of 300 credits

## ISCED field

Field  
Družbene vede, novinarstvo in informacijska znanost

## ISCED subfield

subfield psihologija

## Qualification level

SQF 10  
EQF 8  
Third level

## Learning outcomes

Qualification holders are qualified to:  
(general competences)

- demonstrate knowledge of, analyse and evaluate findings in the field of cognitive neuroscience,
- address core research problems in the field of cognitive neuroscience in an autonomous and original manner,
- observe and synthesise knowledge,
- demonstrate initiative in the accumulation of knowledge (resources),
- undertake self-criticism and recognise the importance of lifelong learning,
- critically assess information sources of various types,
- undertake research at a high level of complexity, both quantitatively and qualitatively,
- use information technology and work in IT,
- express their own opinion, contextualised as part of broader intellectual findings in the social sciences,
- resolve conflicts through analysis of social contexts,
- apply social science knowledge to real professional problems,
- demonstrate a commitment to professional ethics,
- demonstrate a capacity for effective oral communication with a specialist public with regard to findings obtained through experimentation,

- write scholarly articles in journals included in the JCR,

(subject-specific competences)

- use electrophysiological methods of study of brain function and interpret data obtained in this way,
- use functional near-infrared spectroscopy (fNIRS) for neuroimaging and analysis of data obtained in this way,
- demonstrate understanding of and apply methods that are used in cellular neurophysiology,
- create mathematical and computer models simulating the functioning of neural networks,
- use mathematical and statistical methods to analyse and compare electrophysiological data obtained through experiment,
- demonstrate understanding of and apply the basic transformations and procedures for the computer processing of signals that enable medical diagnostics and recognition systems,
- use computer development environments and custom software in the field of signals,
- demonstrate understanding of the relationship between behaviour and action and brain activity,
- prepare an experimental plan for the purpose of identifying the relationship between psychological/cognitive functions and brain activity, individual indicators of this activity (e.g. ERP, ERD, ApEN, in different frequency bands of the EEG signal).

## Assessment and completion

Examination performance is graded as follows: 10 (excellent); 9 (very good: above-average knowledge but with some mistakes); 8 (very good: solid results); 7 (good); 6 (adequate: knowledge satisfies minimum criteria); 5-1 (inadequate). In order to pass an examination, a candidate must achieve a grade between adequate (6) and excellent (10).

## Progression

In order to progress to the second year, students must complete all course units in the subjects: Neuropsychology of Individual Differences; Bioengineering and Neuroscience; and Elective Subject 1 (40 credits from taught course units) and successfully defend a dissertation proposal. In order to progress to the third year, students must complete all course units in the subjects: Neuroscience; Computational Neuroscience and Elective Subject 2 (40 credits from taught course units).

## Condition for obtaining certificate

In order to complete the programme, students must complete the course units prescribed by the programme, have a scholarly article published or accepted for publication in a journal included in the JCR database, and write and successfully defend a doctoral dissertation, for a total of 180 credits.

## Awarding body

University of Maribor, Faculty of Arts

URL

[http://www.ff.um.si/?language\\_id=1](http://www.ff.um.si/?language_id=1)

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