PHD PROGRAMME TABLE
Announcements of competition for admission to PhD Courses
42nd cycle, Academic Year 2026/2027

PhD Course: NEUROSCIENCES
Available positions: 10
Evaluation Methods: based on academic and research records and interview

Available positions:

Place n.	Description	Financial support	Specific research topic
1	Scholarship	University scholarship	-
2	Scholarship	University scholarship	-
3	Scholarship	University scholarship	-
4	Scholarship	University scholarship funded by Fondazione di Modena	-
5	Scholarship*	Scholarship funded by Local Health Unit / IRCCS Reggio Emilia	Early recognition of psychological distress and biopsychosocial complexity in the clinical oncology setting
6	Scholarship	Scholarship funded by Department of Life Sciences – FIS-2024-05091 project – FIS3 HELP – Hierarchical organic ELectronics sensors for Phenotyping Alzheimer's and Inflammatory Diseases at the Point of Care CUP E53C25002440001 – Prof. Biscarini	Neuropsychological and Behavioral Phenotyping in Alzheimer's Disease and Cerebral Amyloid Angiopathy: integrating clinical neuroscience, imaging, and point-of-care biomarker innovation
7	Scholarship	Scholarship funded by Department of Biomedical, Metabolic and Neuroscience – Prof. Plazzi	Development of CBT interventions for patients with Central Nervous System hypersomnia
8	Scholarship	Scholarship funded by Department of Biomedical, Metabolic and Neuroscience – FIS-2024-04466 project – FIS3 The Blink Code: Cracking Eyelid Signals for Epilepsy Insights" – BEACON CUP E53C25003270001 – Prof.ssa Vaudano	Clinical, kinematic, neurophysiological, and advanced neuroimaging study of paroxysmal eyelid movements in a large cohort of patients with genetic generalized epilepsy
9	Position without scholaship	-	-
10	Position without scholaship	-	-

* The person awarded the PhD scholarship financed by the AUSL-IRCCS of Reggio Emilia may also carry out research activities at the structures of the AUSL itself, according to the indications that will be provided by the PhD Programme Coordinator and/or the Academic Board.

Areas of PhD Programme: The training and research activities will be divided into the following three macro-areas, including also cross-cutting topics, methodologies and technologies:
- *Basic and computational neuroscience:* Study of the central and peripheral nervous system in humans through the following techniques: neuroanatomy, neuropharmacology, molecular and cellular biology, electrophysiology, behavioral, neurocomputational and brain imaging. Laboratory animals (rodents), and cellular models including induced pluripotent stem cells and organoids are also used.
- *Clinical neuroscience:* Study of clinical research topics in the field of neurological and psychiatric disorders across the lifespan; particular relevance will be given to genetic and epigenetic risk factors using specific experimental approaches, as well as to broad-spectrum omics methods.
- *Cognitive neuroscience and psychology:* Study of human cognitive functions through the evaluation of mental operations and their neural substrate, using behavioral and testistic methodologies, as well as psychophysiological and neuroimaging techniques, on healthy subjects or patients with cognitive/affective disorders.
Official course language: English. However, all the PhD students are encouraged to learn the Italian language during the course.
Further information is available from the PhD Programme website at: http://www.dottorato-neuroscienze.unimore.it

Admission requirements: Italian second cycle master's degree ("Laurea Magistrale", under D.M. 270/04 or "Laurea Specialistica", under D.M. 509/99) or Italian degree obtained prior to D.M. 509/99 (the previous Italian regulations) or Second cycle non-Italian Master's degree, equivalent to the Italian degrees mentioned above, in accordance with Article 2 of this Call.
For scholarships with a specific research topic, the Committee will assign an eligibility judgment – either eligible or not eligible – exclusively to candidates who have expressed their interest, based on the thematic or methodological relevance of the submitted research proposal to the topic of the scholarship.

Documents to be attached to the application:

1) In order to express interest in applying for thematic scholarships as well, candidates must complete and attach the file "Declaration of priority interest to compete for scholarships linked to a specific research topic";
2) degree certificate (or self-certification for Italian degrees) including final mark and Transcript of Records including the full list of examinations with corresponding marks. Applicants with a non-Italian degree must attach their certificate (including the full list of examinations with corresponding marks) and a legalized translation or Diploma Supplement and, if available, the Declaration of Value ("Dichiarazione di Valore in loco") issued by the competent Italian diplomatic-consular Representation, or the certificates issued by the CIMEA - ENIC-NARIC centre. If the degree certificate is not yet available or if the degree has not yet been obtained, the candidate must attach a description of the degree with a list of the examinations taken using Annex A;
3) a curriculum vitae including their scientific and teaching activities in Italian or English using the form in Annex B;

4) any other document considered useful for the candidate's assessment and/or scientific publications; candidates must provide a full list of all the documents and publications attached;
5) a short text in English outlining the development of a potential research project;
6) a summary in Italian or English of the master's thesis, or equivalent, consisting of a minimum of three and a maximum of six pages, structured as follows: thesis motivation, research methods, results achieved;
7) possible certificates of English competence (TOEFL, CAE/Proficiency or others) if available;
8) maximum three letters of introduction/recommendation/reference; in the online application, applicants must enter all the personal details of the professor/researcher/expert who will be sending the letter of recommendation. Once the application has been submitted, the computer system will send an automatic e-mail to the contact person requesting the letter of recommendation. The deadline for uploading letters is June 30th 2026, 11.59 pm (CET); applicants can check on the application summary page whether the contact person has sent the cover letter/recommendation. Within the aforementioned deadline, applicants may send a reminder to the contact person who has not yet done so by selecting the 'reminder' item from the application summary page;
9) copy of a valid identity document.

Evaluation methods:

The selection is made up of 2 phases: evaluation of qualifications and oral examination. The evaluation of qualifications is carried out in the same way for all candidates.

Evaluation of qualifications (60 points):

In the evaluation of candidates' qualifications, the Selection Committee assigns scores up to a total of 60 points, as follows:

1) degree score or document certifying the list of exams and the scores obtained, up to a maximum of 15 points;
2) thesis, up to a maximum of 10 points;
3) publications, up to a maximum of 10 points;
4) synthesis of the research project (3 pages), up to a maximum of 15 points;
5) other qualifications (including specialties and experiences post-graduate), up to a maximum of 10 points.

Oral examination (80 points):

The oral examination, conducted either in person or remotely, will be organized as follows:

- At the beginning of the examination, each candidate is required to deliver a brief presentation on a research topic within one of the specified groups. For each candidate, the Committee will randomly select two more topics from the group chosen by the candidate for his/her presentation. Candidates will have approximately 10 minutes to present.
  A maximum of 40 points can be awarded for this part.
- Candidate will be asked to present his/her research project (Statement of Research Interest). The Committee will discuss the candidate's motivation for

attending the PhD in Neuroscience, as well as his/her specific research interests.
- Proficiency in English will be assessed, along with any optional foreign language indicated by the candidate at the time of application.

Once the evaluation of qualifications and the oral examinations have been assessed, the Committee will compile a merit-based ranking of candidates based on the scores awarded. Candidates obtaining a minimum score of 90/180 will be considered eligible.

LIST OF RESEARCH TOPICS FOR THE ORAL PRESENTATION

Group 1

1) The genesis of nerve impulses: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
2) The synapse: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
3) The reflexes: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
4) Molecular and cellular basis of signal transduction: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
5) The motor system: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
6) The visual system: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
7) The somatosensory system: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.
8) The systems that regulate alertness, consciousness and sleep: introduce the topic in a general way and describe in detail one or more specific topics for which s/he has more in-depth expertise on the basis of her training or research activity.

Group 2

9) Social cognition: introduce the topic in a general way and explain in detail a research topic in the field of social cognition;
10) Visualization techniques of mental activities: introduce the topic in a general way and explain in detail a visualization technique;
11) The relationship between perception and action: introduce the topic in a general way and explain in detail a research topic in the field of the relationship between perception and action;
12) The emotional experience: introduce the topic in a general way and explain in detail a research topic in the field of emotional experience;
13) Attention and executive functions: introduce the topic in a general way and explain in detail a research topic in the field of attention and executive functions;
14) Language: introduce the topic in a general way and explain in detail a research topic in the field of the mental mechanisms involved in linguistic processing.

15) The mind-brain relationship: describe from a historical point of view the developments of the relationship between mind and brain up to the present day, possibly also using the knowledge deriving from clinical neuropsychology.
16) The relationship between perception and attention: provide a general introduction to the topic and present in detail a research theme within the field of the relationship between perception and attention.

Group 3
17) Genetic and epigenetic factors in childhood trauma: their implications for adult psychopathology
18) Bio-psycho-social paradigm: scientific foundations and the impact in contemporary clinical practice
19) Medical-psychiatric comorbidity from a psycho-neuro-endocrine-immunological perspective;
20) Neurobiological bases of stress;
21) Genetic and environmental factors underpinning the onset of neurodevelopmental disorders in early childhood;
22) Neural and cognitive mechanisms involved in autism spectrum disorder and ADHD;
23) Psychological and neurobiological mechanisms underlying change during psychotherapy and/or psychiatric rehabilitation;
24) Psychological and neurobiological characteristics of adolescence.

At the beginning of the examination (which will last a maximum of one hour) two topics for each Group of topics among those listed above are randomly chosen, one of which can be chosen by the candidate for her/his written report.

EXAMS SCHEDULE

In-person interview: July 7th, 2026, 9:00 a.m., at the Physiology Classroom H1.1 – 1st floor, Department of Biomedical, Metabolic and Neuroscience Sciences, Via Giuseppe Campi 287, Modena. Interviews could eventually continue on July 8th 2026, 9:00 a.m., at the Physiology Classroom H1.1 – 1st floor, Department of Biomedical, Metabolic and Neuroscience Sciences, Via Giuseppe Campi 287, Modena, should there be a high number of candidates.

Candidates with justified reasons (e.g., residents abroad) may request the remote interview. In this case, instructions on how to conduct the interview will be communicated following the communication of the evaluation of qualifications by the Committee.