

Research Master Cognitive Neuroscience

Radboud University Nijmegen

Assessment report

9 March 2026



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1. SUMMARY

The site visit of the research master Cognitive Neuroscience of Radboud University was performed on 11 November 2025 by a panel of peers. Below, the main findings and recommendations of the panel are summarised.

Standard 1 – intended learning outcomes

The panel praises the clear and ambitious academic profile of the research master's programme in Cognitive Neuroscience. The programme educates students to acquire in-depth theoretical knowledge of cognitive neuroscience, advanced research skills, and the ability to address complex research questions from an explicitly interdisciplinary perspective. A key strength of the programme lies in its close and structural embedding within the Donders Institute for Brain, Cognition and Behaviour. The clear correspondence between the four programme tracks and the research themes of the Donders Institute provides coherence and contributes to a strong and recognisable academic profile. The programme is clearly aligned with national and international frameworks.

The panel finds that the programme is well aligned with expectations within academia and adequately prepares graduates for PhD trajectories and other research-intensive positions. In addition, the inclusion of transferable skills ensures that graduates are also well equipped for research-related positions beyond academia. The programme's intention to strengthen and formalise connections with the non-academic professional field is welcomed; the panel recommends continuing and further strengthening these connections. In addition, the panel recommends continued development and regular review of the programme's intended learning outcomes.

Based on the interviews and the review of the underlying documentation, the panel concludes that the programme **meets standard 1: Intended learning outcomes**.

Standard 2 – teaching-learning environment

The panel is positive about the teaching and learning environment of the MSc Cognitive Neuroscience programme. The curriculum is well structured and coherent, offering students a strong combination of foundational theoretical training, advanced research methods, skills development, and extensive research experience. The clear focus on research, culminating in a substantial internship and master's thesis, provides students with excellent preparation for independent research and further academic careers. The strong integration with the Donders Institute gives students direct access to high-quality research facilities, expert researchers, and an internationally oriented academic environment. The panel also appreciates the flexible design of the curriculum, which allows students to tailor their study paths, as well as the explicit attention given to student wellbeing and career development.

The panel's recommendations under this standard concern strengthening methodological and quantitative training, safeguarding a balanced study workload, improving access to personalised support, and further developing a clear, programme-wide didactic vision.

Based on the interviews and the review of the underlying documentation, the panel concludes that the MSc Cognitive Neuroscience programme meets standard 2: Teaching-learning environment.

Standard 3 – student assessment

The panel is positive about the assessment system of the MSc Cognitive Neuroscience programme. Assessment procedures are well organised, transparent, and aligned with the programme's intended learning outcomes. The programme makes use of a broad range of assessment methods, as well as assessment matrices and standardised grading rubrics. The panel also values the strong role of the Examination Board, which actively safeguards assessment quality through monitoring, calibration, and random checks of final projects. In addition, the recent establishment of an Assessment Committee to review assessments, rubrics, and feedback practices demonstrates the programme's clear commitment to continuous improvement.

The panel's recommendations under this standard concern strengthening the systematic review of assessment instruments, enhancing consistency in grading and feedback practices, increasing awareness of programme-specific assessment guidelines among supervisors, and continuing the careful and responsible integration of generative AI into assessment practices.

Based on the interviews and the review of the underlying documentation, the panel concludes that the MSc Cognitive Neuroscience programme meets standard 3: Student assessment.

Standard 4 – achieved learning outcomes

The panel appreciates the high quality of the Master's theses produced within the MSc Cognitive Neuroscience programme. The reviewed theses demonstrate that graduates achieve the intended final level and possess the knowledge, research skills and academic attitudes expected of a research master's programme. The majority of theses are analytically strong, well-structured and clearly embedded in current developments in the field of cognitive neuroscience. The academic level of the programme is further evidenced by the fact that a number of theses have been submitted to international peer-reviewed scientific journals. While variation in quality between theses is observed, this variation is appropriate and is consistently reflected in differentiated grading by the assessors. Taken together, these findings provide convincing evidence that students successfully achieve the programme's learning outcomes.

The panel is also positive about graduates' academic and professional outcomes. A substantial proportion of graduates continue in academic careers, including PhD trajectories, while others find positions in applied research and related sectors. These outcomes are consistent with the programme's strong research orientation and its emphasis on transferable skills.

Based on its review of the assessed theses, the panel recommends continued attention to clarity and transparency in the interpretation and weighting of thesis assessment criteria, in order to further

strengthen consistency between assessors and students' understanding of how final judgements are reached.

Based on the interviews and the review of the underlying documentation, the panel concludes that the programme meets standard 4: Achieved learning outcomes.

The chair and secretary of the panel hereby declare that all members of the panel have considered this report and agree with the judgements recorded in the report. They confirm that the assessment was carried out in accordance with the requirements regarding independence.

9 March, 2026

Sander Nieuwenhuis
(chair)

Yvet Blom
(secretary)

2. INTRODUCTION

Procedure

Radboud University has appointed Odion Onderzoek to coordinate the external quality assessment of the research master's programme Cognitive and Clinical Neuroscience. This assessment is conducted in the context of the accreditation of a cluster of research master's programmes: cluster WO OZM Cognitive Neurosciences -1. This cluster comprises four research master's programmes: Cognitive and Clinical Neuroscience at Maastricht University, Cognitive Neuroscience at Radboud University Nijmegen, Neurosciences at VU University and Neuroscience at Erasmus MC.

Drs Marlies van Beek from Odion Onderzoek acted as project leader of this cluster. Yvet Blom MSc was the secretary for the research master's programme at Radboud University.

The assessment was conducted in accordance with the procedures and standards of the NVAO's "Assessment Framework for the Accreditation System of Higher Education in the Netherlands" (Government Gazette 2024, no. 6405) and the additional criteria for research master's programmes (NVAO 2016). The programmes within this cluster are existing programmes, and the four institutions involved hold a positive institutional audit decision on quality assurance.

The panel was asked to evaluate the programme using a self-evaluation report and interviews with its representatives. The assessment was performed according to the four standards outlined in the NVAO assessment framework, including the additional criteria for research master's programmes.

The research master Cognitive Neuroscience of Radboud University was reaccredited in 2020. This site visit was performed on 11 November 2025. The programme composed a panel of peers for the evaluation:

- Prof. dr. Sander Nieuwenhuis (chair), Full professor of Cognitive Neuroscience, chair Research Master Program Committee, Universiteit Leiden;
- Prof. dr. Jocelien Olivier, Associate Professor, Faculty of Science and Engineering, Rijksuniversiteit Groningen; Olivier lab - Developmental Behavioural Neuroscience;
- Prof. dr. Hans op de Beeck, Full Professor of Brain and Cognition; Dean of Faculty of Psychology & Educational Sciences, University of Leuven (KU Leuven);
- Matilde Ruo (student member), master's student Rijksuniversiteit Groningen, master Behavioural and Cognitive Neurosciences, N track (Molecular and Clinical Neurosciences).

The panel was supported by Yvet Blom MSc from Odion Onderzoek as secretary.

Prior to the assessment process, the panel chair completed a training course on the NVAO's "Assessment Framework for the Accreditation System of Higher Education in the Netherlands" (2024). The cluster project leader discussed the standards, procedures, and responsibilities with the chair in accordance with the "Profile of the Chair" (NVAO, 2016) and the guidelines provided in the NVAO training course "Train the Chair." The other panel members received instructions by the secretary during a kick-off meeting, where the secretary and chair informed them about the content and purpose of the assessment framework, as well as the procedure, intended attitude, working methods, and timeline within the cluster.

Prior to the site visit, the research master's programme Cognitive Neuroscience submitted a list of recent theses. In consultation with the secretary, the panel chair selected fifteen final theses, taking into account a spread of final grades, assessors, and the four tracks. The panel reviewed the selected final theses and accompanying assessment forms. The panel assessed the theses in accordance with the NVAO guidelines for the review of final projects (Implementation Regulations, September 2024). An overview of the reviewed materials, including the selected theses, is provided in Annex 5.

The documentation was made available to the panel in a secured online environment on 16 September 2025. In the run-up to the site visit, the panel studied the self-evaluation report and several supporting documents. All documents examined by the panel are available in Annex 5. The self-evaluation report provides insights into the programme and a reflection on the strengths and weaknesses per NVAO standard. The panel shared their first impressions with the secretary, who made an overview of these first impressions and shared these with the panel members. The panel members discussed their impressions and identified key issues during an online preparatory meeting on 6 November 2025. During the site visit on 11 November 2025, discussions took place between the panel and various representatives of the programme. An overview of the site visit programme is attached in Annex 2. At the end of this site visit, the panel deliberated on findings, considerations and recommendations concerning strengths and areas for development related to the four NVAO standards. Subsequently, the chair presented the initial conclusions reached by the panel to the programme management team and a delegation of the various representatives. A draft version of the report containing the panel's findings and considerations was prepared by the secretary after the site visit and was sent to the panel members for comments. The draft report was then edited based on the panel's comments and subsequently endorsed by the chair. After that, the secretary sent the report to Radboud University to review any factual inaccuracies. Upon their response, this report has been finalised and endorsed by the chair.

Staff members and students of this research master's programme at Radboud University were informed by the faculty in advance about the possibility to speak confidentially with the panel. Participants could register with the secretary by email. A week prior to the site visit, an open consultation hour was scheduled for registered participants. No responses were received whereby the open consultation hour was cancelled.

Institution and programmes

Radboud University is a publicly funded research university founded in 1923, with roots in the Catholic emancipation movement of the early twentieth century. The longstanding history of the university continues to shape its strong commitment to social responsibility, ethical reflection, and equal opportunities for social and cultural minorities. Radboud University fosters an open, inclusive, and intellectually challenging academic environment. Staff and students engage critically with academic content, with each other, and with societal issues, and take responsibility for the quality and impact of their work. The university actively promotes a culture of mutual respect, collaboration, and care for both the academic community as well as society as a whole.

Research and education at Radboud University are closely connected. Across its seven faculties and fifteen research institutes, academic researchers, lecturers and students engage with virtually all scientific domains to address academic issues and societal challenges. The interdisciplinary environment encourages them to seek collaboration and look beyond the boundaries of their own disciplines.

The MSc Cognitive Neuroscience is a two-year, full-time, English-taught research master's programme (120 EC). The research master is an interfaculty programme, with the Faculty of Social Sciences as the coordinating faculty. Education and supervision are provided in close collaboration with the Faculties of Medical Sciences, Science, Arts, and Philosophy, and with the Max Planck Institute for Psycholinguistics. The programme selects and educates motivated and talented future researchers in the field of cognitive neuroscience. Students study cognitive functions such as perception, memory, action, and language, at multiple inter-related levels, from molecules to minds.

The education during the programme as well as the research components are closely integrated through the programme's formal embedding in the Donders Institute for Brain, Cognition and Behaviour. The Donders Institute is an internationally recognised research institute. MSc students conduct their research within the Donders Institute, which organises education for both MSc students as well as PhD candidates. The MSc Cognitive Neuroscience programme is part of the Graduate School. By integrating the MSc programme into the Graduate School, students learn in a research-intensive educational environment with close engagement with active research communities.

The MSc Cognitive Neuroscience programme has four tracks that correspond to the four core research themes of the Donders Institute: Language and Communication; Perception, Action and Decision-Making; Development and Lifelong Plasticity; and Natural Computing and Neurotechnology. The curriculum combines mandatory core courses that provide a theoretical foundation in cognitive neuroscience with advanced training in research methods, track-specific courses, dedicated skills training, and elective courses. Students complete the programme with a substantial research internship and the writing of a thesis in the form of a fully-fledged scientific article. The quality of the thesis is such that it is, in principle, suitable for submission to an international peer-reviewed scientific journal.

Upon completion of the programme, graduates are able to formulate and address complex neuroscientific research questions, work effectively in interdisciplinary research settings, and contribute to the advancement of cognitive neuroscience. The majority of graduates proceed to PhD programmes or research-oriented positions. A smaller portion of the graduates pursue careers in fields such as data

science, technology development, policy-related research, or other knowledge-intensive sectors where advanced analytical and research skills are essential.

3. PROGRAMME ASSESSMENT

Standard 1: intended learning outcomes

The intended learning outcomes tie in with the level and orientation of the programme; they are geared to the expectations of the professional field, the discipline, and international requirements.

Finding and considerations

The MSc Cognitive Neuroscience programme at Radboud University is a research-oriented master's programme designed for highly motivated and talented students who aspire to pursue research careers in cognitive neuroscience. Graduates of the programme possess both in-depth theoretical knowledge of cognitive neuroscience as well as extensive hands-on experience with state-of-the-art research methods. During the programme, students study core cognitive functions such as perception, memory, action, and language, at multiple inter-related levels, from molecules to minds. Students learn to address complex research questions that cannot be adequately answered from a single disciplinary perspective, and acquire advanced theoretical and methodological training characteristic of the interdisciplinary field of cognitive neuroscience.

The MSc Cognitive Neuroscience programme works closely with the Donders Institute for Brain, Cognition and Behaviour, an internationally leading research institute in cognitive neuroscience located on the Radboud University campus. The close collaboration ensures that the education within the MSc programme is closely connected to current neuroscientific research at the Donders institute. The MSc Cognitive Neuroscience programme has four tracks that correspond to the four core research themes of the Donders Institute: Language and Communication; Perception, Action and Decision-Making; Development and Lifelong Plasticity; and Natural Computing and Neurotechnology.

The interdisciplinary nature of the programme is reflected in its interfaculty organisation. The MSc programme is coordinated by the Faculty of Social Sciences, while teaching and supervision are provided by academic staff from the Faculties of Social Sciences, Medical Sciences, Science, Arts, and Philosophy, as well as by researchers from the Max Planck Institute for Psycholinguistics. Together, these disciplines provide the theoretical and methodological foundations of the programme.

Intended Learning Outcomes

The Radboud University has put together 17 clearly formulated intended learning outcomes (ILOs) for the MSc Cognitive Neuroscience programme. The 17 ILOs are based on the domain-specific reference framework for master's-level programmes in the neurosciences, which comprises 10 overarching learning outcomes, and are formulated at master's level (NLQF level 7). The programme ILOs are divided into six thematic categories: general cognitive skills, domain-specific knowledge, research methods, communication skills, reflection on society and societal issues, and professional attitude. According to the panel, the programme ILOs correspond appropriately with the Dublin descriptors and the domain-specific reference framework. The ILOs describe an ambitious academic level and adequately specify the knowledge, skills, and attitudes required for conducting independent research in cognitive neuroscience.

Furthermore, the panel considers the ILOs to be well aligned with current national and international developments in the field of cognitive neuroscience.

During the site visit, the management of the MSc indicated that the ILOs have not undergone any substantial revisions during the last six years. Although the programme conducts annual reviews of the ILOs as part of the regular quality assurance cycle, a comprehensive revision has not yet taken place. However, such a revision is foreseen in the near future. Programme management noted that the current number of programme ILOs may be relatively high in comparison with the 10 ILOs defined in the domain-specific reference framework. A reduction in the number of ILOs could further improve coherence between the overall set of programme ILOs. At the time of the site visit, the Assessment Committee was conducting a review of the programme's courses, their learning objectives, and, in particular, the assessments used. After these course-level reviews, the programme ILOs will be evaluated as well in a separate review round.

The panel welcomes this ongoing review and encourages the programme to embed the evaluation and revision of the intended learning outcomes more structurally within its continuous quality assurance cycle, rather than primarily at the moments of periodic reaccreditation. Regular reflection on the coherence of the programme ILOs, their alignment with course-level learning objectives and assessments, and their continued relevance to developments in the field of cognitive neuroscience would further strengthen constructive alignment and safeguard academic relevance.

Research and professional field

The panel believes that the close collaboration between the MSc Cognitive Neuroscience programme and the Donders Institute provides a strong and distinctive research environment in which education and research are closely connected to each other. Students and staff benefit from direct access to advanced research infrastructure, interdisciplinary collaborations, and a strong international research community. The four tracks of the MSc programme correspond directly to the four core research themes of the Donders Institute, ensuring a clear and coherent alignment between the MSc programme and research conducted at the institute. The panel regards this close alignment between education and research as a clear strength of the programme.

Researchers of the Donders Institute are actively involved in the MSc programme through teaching, supervision, and curriculum development. Their involvement ensures that the programme remains closely connected to current neuroscientific research and developments in the field of cognitive neuroscience. During the site visit, the management of the programme as well as researchers of the Donders Institute expressed their appreciation for the programme ILOs. According to the interviewees, the programme adequately hands students the knowledge, skills, and professional attitudes required for advanced research positions.

Although the programme has a strong focus on fundamental research and primarily prepares students for PhD positions, it also equips students with transferable skills that are relevant beyond academia. Examples of transferable skills are advanced data analysis, programming, scientific writing, critical

evaluation of evidence, and the ability to work independently and in interdisciplinary teams. Recent curricular developments have reinforced the programme's emphasis on transferable skills. Consequently, graduates are better prepared not only for academic research careers but also for research-related positions in other sectors.

Programme management intends to establish a professional advisory board in the academic year 2025–2026. The advisory board is meant to strengthen and formalise connections with non-academic professional fields and to safeguard the continued alignment of the programme ILOs with developments beyond academia. The panel supports this plan and encourages programme management to proceed with the initiative.

Conclusion

Based on the documentation and conversations the panel concludes that the research master's programme **meets standard 1: Intended learning outcomes**.

Standard 2: teaching-learning environment

The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes.

Finding and considerations

The MSc Cognitive Neuroscience programme is a full-time, two-year research master's programme (120 EC). According to the panel, the programme offers a flexible, well-balanced, and coherent curriculum. The panel believes that the ILOs are covered sufficiently across the curriculum, including within all four tracks. The first year of the MSc programme focuses on foundational theoretical training in cognitive neuroscience which is provided by three mandatory core courses, complemented by in-depth training courses on research methods, track-specific education, skills training, electives, and a learning line Personal and Professional Development (PPD). The second year of the MSc programme is largely devoted to the master's research internship and thesis project (45 EC).

The curriculum offers a high degree of flexibility in terms of content and timing. With the exception of the mandatory core courses, students are able to select courses within each curriculum component (such as research methods, track-specific education, skills training, electives, and PPD) and to distribute these courses across the two years of the programme. This flexibility is supported by a personal Training and Supervision Plan (TSP), which students develop at the start of the programme. In the TSP, students outline their planned course choices and the intended timing of these courses. The programme coordinator reviews each TSP to assess its feasibility, coherence, and alignment with programme requirements. Where necessary, the coordinator discusses adjustments with the student. The panel regards the TSP as an effective instrument for implementing the flexible curriculum and for supporting structured planning, progress monitoring, and student guidance.

Core curriculum

The three mandatory core courses of 6 EC each (18 EC in total) offer a strong cognitive neuroscience foundation. The core course *Trends in Cognitive Neuroscience* focuses on current developments in the cognitive neuroscience field and is taught by leading local researchers. *Neuroimaging I* provides students with a fundamental understanding of contemporary neuroimaging techniques and their applications, including (f)MRI, EEG, and MEG. The core course *Neurophilosophy* challenges students to reflect on conceptual and ethical issues related to research on the brain and mind.

Students have to choose one advanced research methods course (6 EC) from the following options: *Neuroimaging II: Haemodynamic Methods*, *Neuroimaging II: Electrophysiological Methods*, *Molecular and Cellular Neuroscience*, and *Neural Stem Cells to Model Neurological Disorders*. During the site visit, the panel noticed that the MSc programme does not include a mandatory statistics course. Lecturers explained that students can strengthen their statistics knowledge by choosing skills training courses on statistics, in order to learn to apply statistics in their own research projects. Although the panel understands this decision, they consider it essential that the MSc programme ensures that all students attain the necessary basic level of statistical knowledge and skills. The panel highlights this fact especially given the wide range of prior educational backgrounds of incoming students. The panel therefore recommends that the programme introduces a mandatory statistics course into the MSc Cognitive Neuroscience curriculum.

Students select 24 EC of track-specific courses: 18 EC within their chosen track and an additional 6 EC from any of the other tracks. Several track courses are shared with other master's programmes, including Artificial Intelligence, Biomedical Sciences, and Physics and Astronomy. The management of the MSc programme states that shared courses reduce overheads, prevent teaching staff from essentially teaching the same material twice. These shared courses also incorporate interdisciplinarity into the curriculum, and ensure that students have access to a broad and diverse range of specialised courses.

During the site visit, the panel discussed recent developments of research methods in cognitive neuroscience with the management and lecturers of the MSc programme. The programme has placed a strong emphasis on neuroimaging techniques such as fMRI, EEG, and MEG. However, in recent years, research at the Donders Institute and in the neuroscientific field has increasingly incorporated brain stimulation techniques and computational methods. The MSc programme now introduces students to these methods through lectures and illustrative examples. Management expressed the ambition of strengthening hands-on methodological training, enabling students to engage more thoroughly with these methods within their own research projects. The panel agrees that it is important to follow up on methodological developments in the neuroscientific field and therefore recommends implementing practical training in computational methods and brain stimulation within the Tracks 1, 2, and 4.

With regard to Track 3 (*Development and Lifelong Plasticity*), the panel learned during the site visit that biomedical method courses that were previously offered by the medical faculty are no longer available. The panel believes it to be essential that Track 3 continues to provide students with adequate

methodological training in the biomedical domain. Therefore, the panel recommends the MSc programme to develop its own biomedical methodological training course for Track 3.

Skills training and electives

The MSc programme offers multiple stand-alone skill training courses, designed to strengthen students' practical and transferable research skills. Students are required to complete at least 12 EC of a total of 35 EC skill training courses. These courses are distinct from, and complementary to, the skills training embedded in the core courses, advanced methods courses, and track-specific education. The available courses include, among others, neuroanatomy, mathematics, programming, statistics, laboratory animal skills, and academic writing.

The minimum requirement for skills training was recently increased from 6 to 12 EC. According to programme management, this change reflects both the growing importance of quantitative and methodological skills in contemporary cognitive neuroscience and the programme's intention to better prepare graduates for a wide range of research careers within and beyond academia. The panel considers the increase from 6 to 12 EC appropriate and well aligned with current developments in the neuroscientific field.

Students are required to complete at least 10 EC of elective courses. Examples of elective courses are *The Auditory System*, *Advanced Machine Learning* and *Molecular and Cellular Neurobiology*. In accordance with the Education and Examination Regulations (EER), students can choose elective courses both within as well as outside of the MSc Cognitive Neuroscience programme. Students indicated that the programme coordinator plays an active role in advising them on suitable elective courses. To support a balanced study programme, students are encouraged to distribute elective courses evenly over the two years of studying. The panel considers the option to take elective courses outside the MSc Cognitive Neuroscience programme to have a clear added value, as it enables students to broaden their interdisciplinary perspectives and reinforces the programme's interdisciplinary character without compromising its coherence.

Personal and professional development

The panel appreciates the programme's explicit focus on student wellbeing and career development through the learning line Personal and Professional Development (PPD). PPD consists of a coherent set of courses and educational activities that support students' personal development, professional orientation, and preparation for future careers. Students are required to complete 5 EC within PPD, choosing from courses such as *What's Next?*, lab rotations, and coaching/personal development. PPD also offers the possibility to participate in workshops or summer schools in the Netherlands or abroad. Subject to prior approval by the programme coordinator, participation in such activities may be awarded EC.

A distinctive element of the PPD learning line is the coaching and personal development course, which includes both individual and group sessions. The professional coach responsible for this course has a

background as an established cognitive neuroscience researcher at faculty level. Her academic experience provides a strong frame of reference for addressing the personal, professional, and academic challenges faced by students in a research master's programme. Students with whom the panel spoke expressed strong appreciation for the coaching course, particularly valuing the personalised support in exploring their interests, strengths, and future career pathways. At the same time, students indicated that the number of available places in the coaching course is limited, meaning that not all students who wish to participate are able to enrol. The panel considers the coaching course a clear strength of the programme, and encourages the programme to widen its accessibility or explore alternatives to give all students access to such coaching trajectories.

The panel is also positive about the lab rotations included in the PPD learning line. These rotations allow students to familiarise themselves with the diversity of research methodologies and research groups within the Donders Institute. The lab rotations support informed choices regarding the research internship and help students identify research environments that best align with their interests. Students spoke very positively about the value of these lab rotations.

Practical training and thesis

A defining feature of the MSc programme is the extensive research project in the second year. The research project consists of an internship and a master's thesis (45 EC). The research project accounts for 75% of the second year. Students conduct an original research project within the domain of cognitive neuroscience under the supervision of researchers affiliated with the Donders Institute. To facilitate access to suitable research projects, the programme organises both virtual and on-site internship markets, during which Donders Institute's researchers present available projects. Although an internship within the Donders Institute is encouraged, students may also choose to complete an internship outside the Donders Institute, either nationally or internationally, provided that the project meets the programme's academic requirements and that an educational supervisor affiliated with the programme is appointed to safeguard academic standards. The panel appreciates the programme's flexibility to accommodate a wide range of research topics and methodologies within the field of cognitive neuroscience.

Both students and staff consider the duration and intensity of the research project appropriate. The extended time allocated to the internship and thesis enables students to develop and apply advanced research skills, to engage independently with complex research questions, and to contribute meaningfully to an ongoing research project. To create sufficient space for the intensive research project in the second year, some students choose to complete a very large proportion of their coursework (up to 75 EC) in the first year. While this flexibility is appreciated by students, the panel notes that it can result in an excessive workload during the first year. The panel therefore advises the programme to take more explicit measures to discourage students from taking up such a high study load in the first year and from exceeding the nominal duration of the internship and master's thesis project. This may include clearer guidance on study planning and consideration of adjustments to the structure or organisation of the second year.

Study load

The MSc Cognitive Neuroscience programme has a study load of 120 EC and is structured as a two-year research master's programme. The extended study load is necessary to achieve the intended final level from an international perspective. Research master's programmes in cognitive neuroscience and related fields typically require two years of study to provide sufficient depth in theoretical knowledge, advanced methodological training, and independent research experience.

Within the programme, the additional study time allows students to complete advanced methods courses and an extensive research internship and Master's thesis project. These components are essential for preparing graduates for PhD trajectories and research-oriented careers. The panel therefore considers the extended study load appropriate and consistent with international standards for research master's programmes.

Learning environment

The MSc Cognitive Neuroscience programme provides a strong and well-designed learning environment that is closely aligned with its research-oriented objectives. Prior to the start of the programme, students participate in an introduction week that includes informative sessions regarding the programme itself and its curriculum as well as social activities aimed to create a strong sense of community. The panel noticed that the sense of community among students is indeed strong. An important contribution to the community-building among students is made by the student association Dondrite. Dondrite plays an active role in organising the social elements of the introduction week. The association promotes interaction between students and staff of the Donders Institute by organising social and study-related activities, including guest lectures, discussion groups on current topics in the neuroscientific field, and study groups. According to the panel, these activities strengthen students' sense of belonging and contribute positively to the overall quality of the study environment.

The MSc programme offers a broad range of teaching methods, including lectures by expert researchers, workgroups, group assignments, (computer-based) practicals, laboratory visits, and tissue dissection. Several courses make use of blended learning and flipped-classroom approaches, combining pre-recorded lectures with in-class discussions, student presentations, and problem-solving activities. Students develop essential academic skills such as preparing research proposals, writing manuscripts, conducting peer review, and giving presentations. These and other skills are obtained during multiple courses in both group and individual form.

During the site visit, students explicitly expressed their appreciation of the research facilities available to them. Students have access to state-of-the-art infrastructure at the Donders Institute, including advanced brain imaging equipment and other high-quality laboratory facilities. This infrastructure supports the practical training required for future researchers in cognitive neuroscience. According to the students, these strong research facilities of the Donders Institute were an important factor in their decision to enrol in the MSc programme.

A point of attention within the learning environment concerns didactic quality, particularly in mathematically intensive courses. Given their various educational backgrounds, students widely differ in their levels of math-related prior knowledge. Pass rates for math-heavy courses are relatively low, and students have expressed concerns about teaching approaches and organisational clarity. These concerns were raised in the student chapter of the self-evaluation report and were confirmed during discussions with students and staff at the site visit. Programme management, teaching staff, and student representatives from the Degree Programme Committee (DPC) are well aware of these concerns and have been exploring options to improve both the content and the didactic approach of the math-heavy courses. As an interim measure, programme management has facilitated student-led study groups focusing on mathematical skills. Feedback from the DPC indicates that these initiatives are valued by participating students. In June 2025, programme management also introduced a set of Teaching Requirements and Best Practices for all teaching staff, and lecturers have begun to adopt more interactive teaching methods. In addition, programme management is preparing a more comprehensive curriculum revision, to be completed in the academic year 2026–2027. Students and teaching staff, including representatives from the DPC, are actively involved in this curriculum revision. However, given the wide diversity in students' prior educational backgrounds, the panel expects that some students may continue to encounter difficulties in mathematically intensive courses, even when teaching quality and didactic approaches are further strengthened.

The panel acknowledges the considerable efforts undertaken to improve didactic quality of teaching. At the same time, the panel emphasises that, in a programme with a diverse student population, high-quality didactics alone are not sufficient to guarantee uniform study outcomes. Additional structural measures are therefore required to clarify expectations, provide differentiated support where needed, and ensure transparency about the level of mathematical competence required. The panel therefore advises Radboud University to develop and implement a clear, programme-wide didactic teaching vision that explicitly addresses diversity in prior knowledge while safeguarding the academic level of the MSc programme.

Student support and counselling

The panel is impressed by the quality and accessibility of student support and counselling within the MSc Cognitive Neuroscience programme. Given the demanding programme and the amount of flexibility students have in designing their individual study routes, a well-structured support system is essential. The programme offers multiple forms of support, including counselling from study advisors, the programme coordinator, coaching and personal development courses (PPD learning line), and university-wide workshops on topics such as effective study strategies and burnout prevention. Information about the support options is clearly communicated through a dedicated information page on the MSc programme's (online) Brightspace community. Students are positive about the available support and counselling services.

Students who require more in-depth support or certain specific provisions to be able to successfully complete the programme, for example due to a disability, can contact a student counsellor. Student

counsellors provide advice on appropriate possibilities, such as extra exam time or screen reading software.

English title and language

The panel is of the opinion that the MSc Cognitive Neuroscience programme provides a clear and well-founded reason for the English title of the programme and for it being offered entirely in English. The English title accurately reflects the international scientific field of cognitive neuroscience and corresponds with the terminology commonly used in academic research and international master's programmes in this discipline. English is the common language in the field of cognitive neuroscience and the programme has (therefore) a strong international orientation. The international orientation of the programme is reflected in both the curriculum and the diverse student and staff population. Fluency in spoken and written English is a requirement for all academic positions at the Donders Institute, ensuring that teaching staff possess adequate language proficiency.

Admission and selection

Admission to the programme is selective. Applicants must hold at least a bachelor's degree (BSc or BA) in psychology, biology, medicine, physics, mathematics, artificial intelligence, linguistics, behavioural sciences, neuroscience, or another discipline that provides the necessary knowledge foundation for an advanced cognitive neuroscience programme. The programme admits talented students who demonstrate a strong academic background in a relevant discipline, as well as the motivation and capacity to engage in independent (international) research. To be selected for the programme, applicants have to submit a motivation letter, their curriculum vitae, their degree transcript (with the completed courses and obtained grades), two letters of recommendation, and proof of English proficiency.

The admission procedure consists of several stages. The first step consists of admissions officers verifying whether applicants meet the formal prior-education requirements. The second step is the programme coordinator reviewing the applications in more detail, and, where necessary, discussing the applications with the programme director or track coordinator. After the review by the programme coordinator and programme director, applicants are considered either eligible, ineligible or invited for a clarifying interview when additional information is required.

The programme attracts a high percentage of international students. The panel considers a large international student population a clear strength of the MSc programme, as cognitive neuroscientific research is inherently international. The panel notes, however, that the wide range of eligible bachelor's degrees can result in substantial differences between students' prior knowledge. While a diverse prior-education policy aligns well with the character of the programme, it places specific demands on curriculum design and teaching approaches. However, taking minor delays into account, most students complete the programme in just over 24 months.

Staff

During the site visit, the panel met with highly motivated and committed expert researchers and lecturers of the Donders Institute and its affiliated faculties and institutes. Courses are typically taught by teams of lecturers that consist of members from different faculties. Students shared their appreciation of lecturers' subject-matter expertise and the open and accessible academic climate of the MSc programme, which encourages students to engage with questions and open discussions. The panel also notes that the international composition of both staff and students enriches the academic and social learning environment, which is experienced by students and staff alike as dynamic and intellectually stimulating. The panel furthermore observes strong engagement and commitment from programme management, which is clearly visible to both students and teaching staff. In addition, the panel appreciates the active and constructive role of the DPC, which contributes to educational quality assurance.

The student–staff ratio of the MSc programme is 19.5. This number exceeds both the national average (17.5) as well as the Radboud University average (17.3). The panel sees this high number as a possible area of concern, particularly because of the growing student intake and government-mandated budget constraints. While the teaching staff with whom the panel spoke indicated that offering the programme in its current size is still feasible, the panel notes that sustained growth may negatively affect the small-scale, interactive character of the programme. The panel therefore recommends that the programme closely monitors developments in the student–staff ratio and their potential impact on educational quality, in order to safeguard the programme's intensive, research-oriented, and personalised learning environment.

The panel considers the interfaculty character of the programme a clear strength, as it enables a genuinely interdisciplinary curriculum and strong connections to a broad range of research domains. At the same time, this structure requires careful coordination and clear communication across faculties. During discussions with students, lecturers, and researchers, the panel learned that programme-specific regulations and expectations are not always consistently known among all teaching staff and supervisors, which may affect coherence and consistency in teaching and quality assurance.

One example illustrating the coordination challenges inherent in an interfaculty programme concerns the University Teaching Qualification (UTQ). Radboud University policy requires all teaching staff with a teaching task of > 0,2 FTE and (with the prospect of) a permanent contract or a temporary contract for 3 years or more to hold, or to obtain, a UTQ or Senior UTQ. Documentation shows that the majority of lecturers involved in the MSc Cognitive Neuroscience programme either hold a UTQ or are currently in the process of obtaining one. The panel notes that the number of UTQ-qualified lecturers involved in the programme has increased since the programme's previous accreditation in 2020. At the same time, a small number of lecturers involved in the programme do not currently hold a UTQ. Nevertheless, the programme requires that each course includes at least one UTQ-qualified lecturer. The panel encourages the programme to continue actively promoting UTQ certification among all teaching staff involved.

Conclusion

Based on the documentation and conversations the panel concludes that the research master's programme **meets standard 2: Teaching-learning environment**.

Standard 3: student assessment

The programme has an adequate system of student assessment in place.

Finding and considerations

The assessment procedures of the MSc Cognitive Neuroscience programme are in line with the Assessment Policy Framework (2024) of the Faculty of Social Sciences. The programme's assessment policy is further outlined in the Education and Examination Regulations (EER). The EER defines students' rights and obligations with regard to education and assessment. The Rules and Regulations of the Examination Board specify the procedures for course assessment and the practical organisation of exams. The quality and reliability of assessment are safeguarded by the MSc Examination Board, which consists of five members: one representative from each of the four tracks and one external member who is not affiliated with the MSc Cognitive Neuroscience programme. In 2025, the chair of the Examination Board and a faculty education advisor formed an Assessment Committee. The Assessment Committee was established to conduct a comprehensive review of all course assessments, learning objectives, and assessment instruments within the programme. The review aims to improve assessment rubrics, feedback practices, and further alignment of assessment procedures with the Assessment Policy Framework. At the time of the site visit, this review was ongoing.

Constructive alignment

Assessment within the MSc Cognitive Neuroscience programme is aligned with the programme ILOs. Each course is linked to specific course-level ILOs through an assessment matrix that explicitly shows how the course contributes to the programme-level ILOs. The assessment matrices are prepared by course coordinators or examiners and form the basis for constructive alignment of learning outcomes, teaching activities, and assessment. At the time of the site visit, the Assessment Committee was in the process of reviewing each course, including their assessment matrices and the alignment of the programme ILOs.

Assessment methods

The MSc has a wide range of summative assessment methods, including written exams (with both open and multiple-choice questions), essays and research reports, (computer-based) assignments, take-home exams, and oral presentations. Many courses combine multiple assessment formats. Group assignments are used to stimulate discussions and peer learning. Almost every course also includes an individual assessment component to ensure that individual contributions of students are assessed as much as the group component. Assessment methods are chosen based on the course ILOs and teaching methods. In addition to summative assessment, the MSc has started incorporating formative action, in line with the Faculty of Social Sciences' Assessment Policy Framework, following recommendations from the 2020 accreditation panel for a better balance between summative and formative assessment. Formative

action typically consists of assignments that do not, or only minimally, contribute to the final grade. The aim of formative action is 1) to provide students with timely feedback that enables them to adjust their learning strategies, and 2) to adjust the teaching process by inventorying which topics need further attention.

The panel was informed that there is some variation in the grading of lecturers. According to programme management, the differences in grades is partly related to the fact that a lot of the teaching staff are not from the Netherlands. In some countries lecturers tend to grade higher and not everyone is as familiar with the way the Dutch education system grades. Programme management has taken measures to pay more attention to the grading system, including standardisation and calibration, two measures that can reduce variation in grading between lecturers. In particular, the assessment procedure for Master's theses has been improved by the programme by using standardised grading forms, and independent checks by second readers and the Examination Board. In addition, programme management introduced a Teaching Requirements and Best Practices document in June 2025. This document emphasises the use of standardised assessment rubrics and provides programme-wide guidelines for delivering constructive and timely feedback. Furthermore, as part of the ongoing review conducted by the Assessment Committee, course-level assignments, assessment rubrics, and feedback processes are being reviewed and refined with the aim of improving clarity, consistency, and effectiveness across the programme.

Practical training and thesis

The assessment of the research internship and master's thesis is governed by the Research Project Regulations MSc Cognitive Neuroscience. The panel considers these assessment procedures transparent and appropriate for a research master's programme, with adequate safeguards for reliability, validity, and fairness. Prior to the start of the research project, students draft a Research Project Agreement specifying the research question, theoretical background, methodology, project planning, and assessment criteria. Each project is assessed by two assessors: the supervisor and an independent second assessor. This dual-assessment structure supports the consistency and objectivity of the evaluation process.

The assessment of the research project comprises several components, including the quality of the research process, the written master's thesis, and an oral presentation and defence. Clear assessment criteria and grading rubrics are used to evaluate these components. The assessment criteria address the formulation of research questions, methodological choices, data analysis, interpretation of results, scientific writing, and students' ability to reflect on their work. Research internships conducted outside the Donders Institute are assessed according to the same academic standards as internal projects; in these cases, an educational supervisor affiliated with the programme is appointed to safeguard alignment with programme learning outcomes.

Following the 2020 accreditation, the programme introduced a Manual for Research Project Supervisors to further enhance the consistency and quality of supervision and assessment. The manual outlines expectations regarding supervision, feedback, and assessment procedures. During the site visit, the panel

learned that many supervisors are involved in multiple MSc programmes and are therefore not always fully aware of programme-specific guidelines. The panel recommends the programme take additional measures to increase awareness of, and adherence to, the manual among all supervisors involved in this programme.

Generative AI

Programme management informed the panel that faculty- and university-level policies on the use of generative artificial intelligence (AI) are still under development. Across faculties and research institutes, views differ on the role of tools such as ChatGPT in education and research. Current discussions address both the potential educational value of generative AI and concerns related to learning outcomes, assessment validity, and academic integrity. Within this context, the programme places strong emphasis on ensuring that students first develop core academic competencies, including structured reasoning, argumentation, and methodological thinking. Generative AI is therefore positioned as a supportive or reflective tool rather than a substitute for these foundational skills. Teaching staff address this explicitly in their courses, for example by analysing AI-generated outputs and discussing their limitations when applied to advanced or highly specialised scientific tasks.

In response to the increasing availability of generative AI, the programme has adapted assessment formats that were considered particularly vulnerable to (inappropriate) AI use. Greater emphasis is now placed on assessment formats that provide insight into students' individual reasoning processes, such as applied assignments, combinations of written and oral assessment, and oral examinations. At the same time, the programme recognises that assessment practices will need to continue evolving as generative AI develops further. Programme management and teaching staff closely follow ongoing faculty- and university-level policy development on generative AI. The panel emphasises the importance of maintaining an ongoing dialogue among staff and students to support the responsible, transparent, and informed integration of generative AI in teaching, learning, and assessment.

Quality assurance

The Examination Board safeguards the quality, validity, and reliability of assessment within the MSc Cognitive Neuroscience programme. The panel considers the Examination Board a clear strength of the programme and values that all four programme tracks are represented within the Board. The Examination Board operates both reactively and proactively. In its reactive role, the Examination Board systematically monitors the quality, consistency, and fairness of assessments across the programme and handles individual student requests, such as exemptions and special examination arrangements. In its proactive role, the Examination Board advises teaching staff on sound assessment practices and contributes to the continuous improvement of assessment quality.

The programme has several formal mechanisms in place to support quality assurance of examination. These include random checks of Master's theses across all four tracks conducted by the Examination Board, as well as regular calibration and alignment sessions among teaching staff. The calibration sessions contribute to consistency in supervision and assessment practices across the programme.

The panel also regards the programme's strong responsiveness to student feedback on assessment practices and teaching methods as a clear strength. The assessment review, led by the Examination Board in collaboration with programme management, demonstrates the programme's commitment to continuous quality improvement and to maintaining transparent assessment standards.

The panel learned that assessment matrices are not reviewed systematically. Although the programme ILOs and course content have not drastically changed in recent years, the panel considers it important to incorporate the review of assessment matrices in a structured and recurring quality assurance cycle. The panel therefore recommends establishing a formal procedure for the periodic evaluation of these matrices.

Conclusion

Based on the documentation and conversations the panel concludes that the research master's programme **meets standard 3: Student assessment**.

Standard 4: achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Finding and considerations

To assess the final level achieved by graduates of the MSc Cognitive Neuroscience programme, the panel reviewed a sample of 15 Master's theses, including the completed assessment forms, submitted between 2023 and 2024. Based on this review, the panel concludes that the theses consistently meet the required master's level and convincingly demonstrate the achievement of the programme's intended learning outcomes. Overall, the theses are of high academic quality: they are well structured, analytically strong, and address relevant and up-to-date topics in cognitive neuroscience. Within this overall high quality, variation between theses is observed and is appropriately reflected in differentiated grading by the assessors.

In reviewing the assessment forms, the panel notes that in a small number of cases the discussion section of the thesis was relatively underdeveloped. In addition, the panel noticed that certain assessment criteria, such as programming skills and theoretical model comparisons, may not be applicable to all thesis projects. During the site visit, programme management and representatives of the Examination Board explained that thesis assessment is based on an integrated evaluation of the research process, the written thesis and the oral defence, and that not all criteria are expected to be applicable in every project. They also indicated that assessors can clarify the applicability of criteria and their weighting in the additional feedback sections of the assessment forms, and acknowledged that there is variation in how explicitly this is done across assessors.

The panel considers it important that this integrated approach to assessment is made more explicit and transparent for both students and assessors. Clearer guidance on how assessors should deal with non-

applicable criteria and with uneven performance across different components of the thesis would strengthen transparency, support consistency between assessors, and help students better understand how final grades are determined. The panel therefore recommends that the programme further clarifies, in its assessment regulations and guidance materials for supervisors and students, how individual assessment criteria are to be interpreted and weighted, including how to proceed when criteria are not applicable or when specific components of the thesis are insufficient.

The academic level of the theses is further reflected by the fact that a number of MSc Cognitive Neuroscience theses have been submitted to international peer-reviewed scientific journals. In addition, the panel notes positively that the programme supports the student-led academic journal in which students are actively involved in conducting peer reviews. Quantitative data support the high academic level of achieved learning outcomes. In the period 2019–2024, the average grade for all MSc theses ($n = 336$) was 8.3 (standard deviation ± 0.7 ; 95% range: 7.0–9.5). During this period, 43% of graduates obtained the *judicium cum laude* and 4.1% the *judicium summa cum laude*. The panel discussed these relatively high percentages with the Examination Board and programme management. According to both, they can be explained by the programme's selective admission process and its high academic standards. Students who graduate with a *judicium* generally complete the programme within the nominal duration (2 years), and the Examination Board considers the grading of Master's theses to be adequate and consistent.

Career perspectives

Alumni data show that approximately 60% of the graduates currently hold positions in academia, including positions as research assistants, PhD candidates, postdoctoral researchers, and academic staff. This is an excellent outcome for a research master's programme and demonstrates strong alignment with the programme's objectives and the achieved learning outcomes.

An estimated 18 to 35 % of the graduates, pursue careers outside academia such as positions in applied research, policy, consultancy, data science, and technology-related sectors. Some graduates continue their education in other master's programmes, such as medicine or mathematics, or establish their own businesses. The panel considers the type of careers graduates pursue after completing the MSc programme consistent with the programme's learning outcomes, because the learning outcomes emphasise analytical reasoning, methodological competence, and independent scientific thinking.

Alumni

Programme management actively maintains contact with alumni through LinkedIn and a database that tracks alumni career trajectories. In April 2024, the MSc programme organised an event to mark its 20th anniversary. This event was well attended, and alumni provided positive feedback. Such initiatives contribute to a strong and engaged alumni network. Programme management intends to build on this momentum by organising alumni events every five years and by involving alumni in the planned professional advisory board. The panel regards these intentions as positive steps towards further strengthening alumni engagement and the programme's connection to the professional field.

Conclusion

Based on the documentation and conversations the panel concludes that the research master's programme **meets standard 4: Achieved learning outcomes**.

Final conclusion

The NVAO-approved panel has assessed the programme against four standards. The panel concludes that the research master's programme Cognitive Neuroscience meets all standards (intended learning outcomes, teaching-learning environment, student assessment and achieved learning outcomes) and thus rates the overall quality of the programme as positive.

Standard	Judgement
Intended learning outcomes <i>Standard 1: The intended learning outcomes tie in with the level and orientation of the programme; they are geared to the expectations of the professional field, the discipline and international requirements.</i>	Meets the standard
Teaching-learning environment <i>Standard 2: The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes.</i>	Meets the standard
Student assessment <i>Standard 3: The programme has an adequate system of assessment in place.</i>	Meets the standard
Achieved learning outcomes <i>Standard 4: The programme demonstrates that the intended learning outcomes are achieved.</i>	Meets the standard
Final conclusion	positive

In the preceding paragraphs, the panel has discussed and substantiated its positive comments on the programme for each standard. The programme is commended for the following features of good practice:

- The strong and structural integration of education and research through the close collaboration with the Donders Institute for Brain, Cognition and Behaviour, providing students with access to an internationally leading research environment and state-of-the-art research infrastructure.
- The clear and coherent academic profile of the programme, reflected in the alignment between the four programme tracks, the core research themes of the Donders Institute, and the interdisciplinary and interfaculty organisation of the curriculum.
- The well-balanced, coherent, and flexible curriculum of the two-year research master's programme, which allows students to tailor individual learning paths while safeguarding academic depth, coherence, and progression.
- The strong involvement of highly qualified, internationally oriented researchers in teaching, supervision, and curriculum development, creating a stimulating and research-intensive learning environment.
- The programme's strong focus on advanced research skills combined with explicit attention to transferable skills and personal development, including the well-valued Personal and Professional Development (PPD) learning line with coaching and lab rotation opportunities.
- The robust and transparent assessment system, characterised by constructive alignment, a wide and appropriate range of assessment methods, and the strong role of the Examination Board and Assessment Committee in safeguarding assessment quality and consistency.
- The consistently high academic quality of the master's theses, which demonstrate that graduates achieve the intended learning outcomes at master's level (NLQF level 7), and the strong alignment between achieved learning outcomes and graduates' academic and professional career trajectories.

In this report, the panel makes the following observations and suggestions. These are not formal recommendations, but are intended to support the further development and sustainability of the programme:

- The panel observes that differences in prior educational backgrounds of incoming students place increasing demands on methodological and quantitative training. The panel suggests continued attention to levelling measures to support all students in achieving the required academic standards.
- The panel notes that the interfaculty structure of the programme, while a clear strength, requires ongoing coordination. The panel suggests continued efforts to ensure that programme-specific regulations, assessment procedures, and didactic expectations are consistently communicated to all teaching staff and supervisors.

The panel recommends several follow-up actions to further improve the programme. These recommendations do not detract from the panel's positive overall assessment of the quality of the MSc Cognitive Neuroscience programme.

Related to Standard 1:

- Embed the review of the ILOs more structurally in the ongoing quality assurance cycle, by regularly reviewing their coherence, alignment with course-level learning objectives, and relevance to developments in the field of cognitive neuroscience.
- Establish a professional advisory board to strengthen and formalise connections with the non-academic professional field.

Related to Standard 2:

- Introduce a mandatory statistics course to ensure that all students attain a sufficient and comparable level of statistical knowledge and skills, particularly in light of the diverse educational backgrounds of incoming students.
- Strengthen hands-on training in computational methods and brain stimulation techniques within Tracks 1, 2, and 4, in order to remain aligned with current and emerging developments in cognitive neuroscience research.
- Develop and implement a dedicated biomedical methodological training course for Track 3 (Development and Lifelong Plasticity) to ensure adequate methodological depth in the biomedical domain.
- Take explicit measures to discourage students from taking on an excessively high study load in the first year, in order to prevent workload imbalances.
- Improve the accessibility of the coaching and personal development course within the PPD learning line, so that more students can benefit from this valued form of personalised support.
- Develop and implement a clear, programme-wide didactic teaching vision, with particular attention to mathematics-related courses, to sustainably improve didactic quality and study outcomes.

Related to Standard 3:

- Establish a formal and recurring procedure for the systematic review of assessment matrices, to further strengthen constructive alignment and transparency in assessment across the programme.
- Increase awareness of, and adherence to, the Manual for Research Project Supervisors among all supervisors involved in the programme, particularly those affiliated with other faculties or institutes.
- Continue efforts to enhance consistency in grading and feedback practices across courses, including the sustained use of standardised assessment rubrics and calibration activities.

Related to Standard 4:

- Clarify in assessment regulations and the Manual for Research Project Supervisors, how individual assessment criteria for the master's thesis are to be interpreted and weighted. Include how assessors should deal with non-applicable criteria or uneven performance across different components of the thesis.

5. ANNEXES

Annex 1: Administrative data

Institution	
Name in RIO	Radboud University
Address	Houtlaan 4, 6525 XZ, Nijmegen
Website	www.ru.nl
BRIN number	21PM

Programme	
Programme name in RIO	M Cognitive Neuroscience (research)
International name	M Cognitive Neuroscience (research)
Location	Nijmegen
Programme number in RIO	60506
Orientation and level	Academic Master
Research master	Yes
Language of instruction	English
(Legal) professional requirements	No
Specialisations	- Language and Communication - Perception, Action and Decision-Making - Development and Lifelong Plasticity - Natural Computing and Neurotechnology
Joint programme	No
Distinctive feature	No
Degree awarded and addition to the degree	Master of Science
Study load in EC	120 European Credits
Variant(s) (full-time, part-time, dual)	Full-time
Working with units of learning outcomes (full-time, part-time, dual)	No
External assessment group classification	WO OZM Cogn/Neurowet 1
Submission date of accreditation report	May 1, 2026
Other (e.g. name change or extension of study duration)	No

Annex 2: Programme site visit

Final program site visit Tuesday 11 November 2025

08:45 – 09:00 Arrival panel and welcome (CNS management and vice-dean)

09:00 – 09:30 Panel preparation

09:30 – 10:15 CNS management

10:15 – 10:30 Panel deliberation

10:30 – 11:15 Teaching staff

11:15 – 11:30 Panel deliberation

11:30 – 12:15 Students and alumni

12:15 – 13:00 Lunch and panel deliberation

13:00 – 13:45 Donders Institute Executive Board & Research Platform

13:45 – 14:00 Panel deliberation

14:00 – 14:45 Examination board & assessment committee

14:45 – 15:45 Panel deliberation

15:45 – 16:15 Extra session for additional questions

16:15 – 17:15 Development session

17:20 – 17:35 Presentation preliminary findings (public)

17:35 – 17:40 Closing

Annex 3: Learning outcomes of the programme

The following are the 17 Intended Learning Outcomes (ILOs) of the MSc CNS, grouped into six categories (A-F). These are laid down in the Education and Examination Regulations (EER). Following the enumeration of the 17 ILOs, Table II-1 links each ILO to one of the five Dublin Descriptors.

A. General cognitive skills:

1. *Theoretical skills*: Students will have acquired a way of thinking that will enable them to comprehend and solve problems, while maintaining a critical stance towards established scientific insights. They have a good overview of the scientific literature to develop a critical attitude to well-established theories and to develop new theoretical concepts for open problems in the field of CNS;
2. *Analytical skills*: Students will be able to formulate and analyse scientific problems at an abstract level by dividing them into testable sub-problems, differentiating between major and minor aspects;
3. *Synthesizing skills*: Students will be able to synthesize solutions to sub-problems within a scientific framework and thus contribute to the formulation of general theories;
4. *Scientific skills*: Students will possess knowledge about paradigms, theory, experimental methods and techniques, methods for data analysis and modelling, insofar as relevant for CNS at the Master's level;
5. *Computational skills*: Students will possess sufficient skills in the fields of computing and computer science, which will enable them to design and implement computer programs and use current application programs;

B. Skills based on knowledge and insights pertaining to the field of CNS:

6. *Basic knowledge*: Students will have gained adequate knowledge and insights pertaining to the basic sub-areas of CNS. The scope of this basic knowledge will be sufficient to allow them to do practical training in one of the research groups;
7. *Specialized knowledge*: Students will possess sufficient skills in at least one sub-area of CNS to conduct scientific research under supervision;
8. *Advanced knowledge*: Students will be able to understand scientific articles on the chosen specialisation. Furthermore, they will be able to follow the developments in the chosen specialisation;
9. *Generalizable knowledge*: Students will be able to assimilate newly acquired knowledge of CNS and to integrate this knowledge with the knowledge they already possess. In addition, they will have the learning ability to orient themselves at specialist level in a sub-area of CNS that lies outside the chosen specialisation;

C. Research methods in CNS:

10. *Literature skills*: Students will be able to find relevant scientific sources relating to CNS problems that need to be solved;

11. *Research skills*: Students will be able to formulate new questions and hypotheses in the fields of CNS, and to select the appropriate pathways and research methods for solving these questions, taking into account the services and means available;

12. *Inference skills*: Students will be able to set up experimental or theoretical scientific research, to systematically process and critically interpret the research results, and to formulate conclusions;

D. General communication skills:

13. *Communication skills*: Students will be able to communicate with colleagues in the same discipline about scientific knowledge, both at basic and specialist levels. They will be able to report orally and in writing, and to discuss a scientific topic in English; Students will also be able to hold an oral presentation and to write a lucid article on the research conducted and modern concepts in CNS for a general non-specialist public;

14. *Dissemination skills*: Students will be able to promote their work via various channels such as scientific journals, conferences contributions, and public events (e.g. science festivals).

E. Reflection on society and societal problems:

15. *Reflective skills*: Students will have gained sufficient knowledge of and insights into the role of CNS in society in order to function adequately in their future professions and reflect on societal problems;

F. Professional attitude:

16. *Ethical attitude*: Students have developed an attitude of scientific integrity;

17. *Critical attitude*: Students have the ability to realise any shortcomings or limitations; they have developed a critical attitude towards their performance as a scientist and have learned how to work on improvement in case of limitations in knowledge or expertise;

Annex 4: Curriculum overview

FIRST YEAR (total 60 EC)	SECOND YEAR (total 60 EC)
Compulsory courses (18 EC)	Compulsory internship (45 EC)
Trends in Cognitive Neuros cience 6 EC	Practical training & thesis 45 EC
Neuroimaging I 6 EC	
Neurophilosophy 6 EC	
Advanced research methods (choose 6 EC)	
NI II: Electrophysiological methods 6 EC	
NI II: Haemodynamic methods 6 EC	
Molecular & cellular neuroscience 3 EC	
Neural stem cells 3 EC	
Track courses (choose total 24 EC)	
(see Appendix III, table III-I)	
Choose from 'own' track 18 EC	
Choose from any track 6 EC	
Skill training (choose 12 EC)	
Neuroanatomy 3 EC	Academic writing 3 EC
Basic mathematics 4 EC	Advanced statistics in R 8 EC
Mathematics for neuroimaging 4 EC	Basic programming in Python 3 EC
Math. programming in Matlab 3 EC	Laboratory animal skills 3 EC
Teaching skills 4 EC	
Personal and professional development (choose 5 EC)	
What's next? 2 EC	Coaching/personal development 1 EC
Lab rotations 3 EC	Workshops, summerschools, etc. X EC
Free elective (choose 10 EC)	

Table 1. The overall structure of the MSc CNS programme. See Appendix III, table III-I for an overview of all speciai-

Annex 5: Documents

Materials made available before the site visit:

- Critical reflection Research Master Cognitive Neuroscience
- Students chapter
- Domain-specific reference frame
- Intended Learning Outcomes (ILOs)
- Donders Institute research assessment report 2019
- List of courses and teaching methods
- Assessment programme
- List of allocated staff
- Teaching Requirements & Best Practices
- Education and Examination Regulations 2025/2026
- Rules and Regulations of the Examination Board 2025/2026
- Annual report DPC
- Annual report Examination Board
- Template Training and Supervision Plan (TSP)
- Template Research Project Agreement (RPA)
- Research Project Regulations
- Manual for Research Project Supervisors
- Thesis and Internship Evaluation Forms
- Master's theses of 15 students

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