Appendices master's degree programme Behavioural and Cognitive Neurosciences (research master) 2014-2015

Appendix A Teaching outcomes of the degree programme (art. 1.3)

The general purpose of the master's degree programme is reflected in the following list of qualifications to be achieved by the graduates of the programme.

	Learning outcomes of the BCN research master programme	**Dublin descriptors**
	Students have acquired	**Knowledge and Understanding**
a.	a broad overview of important contemporary issues in the area of behaviour, cognition, and neurosciences.	Students have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with Bachelor's level, and provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context.
b.	specialized knowledge in one of the three subfields of behaviour, cognition or neurosciences.	
c.	understanding of the need for multidisciplinary approaches and appreciation of the complexity of the brain.	
d.	the capacity to listen to and understand approaches in the other fields, such that they develop a broader, integrated view to the complex problems emerging.	
e.	experience with modern techniques and research approaches.	
f.	knowledge of experimental designs and statistical models.	
g.	a positive critical attitude in the evaluation of scientific results, views and concepts.	
	Students have demonstrated the ability	**Applying knowledge and understanding**
h.	to apply specialised knowledge in one of the three subfields of behaviour, cognition or neurosciences.	Students can apply their knowledge and understanding, and problem-solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.
i.	to approach scientific problems within the field in a multidisciplinary setting and to appreciate the complexity of the brain.	
j.	to listen to and understand approaches in the other fields, such that they develop a broader, integrated view to the complex problems emerging.	
k.	to apply modern techniques and research approaches.	
l.	to apply knowledge of experimental designs and statistical models.	
m.	to evaluate scientific results, views and concepts with a positive critical attitude	

Students have demonstrated the ability n. to conduct scientific research, taking into account the limitations of available information and scientific problems in behaviour, cognition and neuroscience. o. to obtain an overview of the core issues in a scientific area in a short period of time p. to reflect on the social and ethical responsibilities linked to the application of their knowledge and judgements.	**Applying knowledge and understanding** Students can apply their knowledge and judgements.
Students have demonstrated the ability q. to present scientific research in written and verbal form, taking into account the limitations of their conclusions.	**Communication** Students can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously.
Students have demonstrated r. the skills required for further study in a largely self-directed or autonomous manner s. to have an efficient time management. t. to recognize the need for, and an ability to engage in, ongoing learning. u. to have an understanding of the requirements for a successful scientific career and the ability to judge whether he/she fulfills these requirements. v. to have acquired a general work orientation that is required for participation in a research team, contributing to collective goals, effective time management, and participation in a research network. w. to understand and respect guidelines of scientific integrity.	**Learning skills** Students have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.

Appendix B Specializations of the master's degree programme (art. 2.2)

The master's degree programme comprises three tracks. Students can choose to follow one of the tracks or a combination of two tracks.

- Animal and Human Behaviour (B-track)
- Cognitive Neuroscience and Cognitive Modelling (C-track)
- Molecular and Clinical Neurosciences (N-track)

Appendix C Content of master's degree programme (art. 2.3)

The master's degree programme consists of:

1. Overall programme

Module	ECTS	Entry requirements	Assessment	Practical
Introduction to BCN	4	-	written reports, assignments	no
Career related topics	3	-	poster, assignments	no
Colloquium	3	-	oral presentation	no
Track specific modules	20	-	see 2	see 2
Minor research project	29	-	technical and/or laboratory skills, minor thesis, oral presentation	yes
Summer symposium I*	1	Minor thesis	oral presentation/poster	no
Optional modules**	15	**	**	**
Essay***	4			
Major research project	40	Minor thesis	technical and/or laboratory skills, major thesis, oral presentation	yes
Summer symposium II*	1	Major thesis	oral presentation/poster	no

* Students are required to participate twice in the summer symposium: Once after the minor research project and once after the major research project.

** Modules from the list in appendix D. Students in the second year choose three of these modules.

*** Alternatively student are allowed to write a research proposal

2. Track specific modules:

B-track (20 ECTS)

Module	ECTS	Entry requirements	Assessment	Practical
Timing of behaviour	5	-	presentation, assignment	no
Function and evolution of behaviour	5	-	exam, assignment	no
The neuroendocrine basis of behaviour	5	-	paper, assignment	yes
Individuality of behaviour	5	-	exam, presentation	no

C-track (20 ECTS)

Module	ECTS	Entry requirements	Assessment	Practical
Models of cognition	5	-	paper, assignment	no
Functional neuroscience C track	5	-	exam, assignment	yes
Elective module***	5	***	***	***
Repeated Measures	5	-	exam, assignment	yes

*** Module from the "elective modules C-track" list. Students from the C-track choose one of these modules.

N-track (20 ECTS)

Module	ECTS	Entry requirements	Assessment	Practical
Functional neuroscience N track	5	-	exam, assignment	yes
Pathology of the nervous system	5	-	exam, assignment	no
Molecular and cellular neuroscience	5	-	exam, assignment	yes
Stem cell and glia biology	5	-	exam, assignment	yes

3. Elective modules C-track

Module	ECTS	Entry requirements	Assessment	Practical
Computational cognitive modelling	5	-	exam, assignment	yes
Cognitive neuropsychiatry	5	-	exam	no
Molecular and cellular neuroscience	5	-	exam, assignment	yes

Appendix D Optional modules (art. 2.4)

The following list presents optional modules. They are divided into four categories.

I. All track specific modules within the master's degree programme (see appendix C)

II. BCN core-modules. These modules are especially designed for the BCN research master. The BCN research master ensures that these modules do not interfere with other modules offered by the master's degree programme. The following list presents the BCN core-modules.

Module	ECTS	Entry requirements	Assessment	Practical
Behavioural pharmacology	5	-	exam, presentation	no
Human neuroanatomy	5	-	written exam, oral presentation	yes
Philosophy of neuroscience	5	-	essay	no
Auditory and visual perception	5	-	Written exam	no

III. BCN approved modules. No approval is needed for selecting these courses as optional course. However, master's degree programme cannot guarantee that theses courses do not interfere with the other modules offered. It is the student's responsibility to ensure that the selected modules do not interfere. Modules can be chosen from different departments, as presented in the following lists.

1. Modules organised by the Faculty of Mathematics and Natural Sciences

Module	ECTS	Entry requirements	Assessment	Practical
Advanced self-organisation of social systems	5	-	exam, assignment	yes
Animal and human experimentation****	5	-	exam	yes
Language modelling	5	-	assignment, presentation	yes
Perception	5	-	exam, presentation	yes
User models	5	-	assignment, essay	yes
Machine learning	5	-	exam, assignment	yes

**** Module can be only followed as part of the minor or major project.

2. Modules organised by the Faculty of Medical Sciences

Module	ECTS	Entry requirements	Assessment	Practical
Current themes in inflammation and cancer	5	-	exam, presentation	no

3. Modules organised by the Faculty of Behavioural and Social Sciences

Module	ECTS	Entry requirements	Assessment	Practical
Current topics of intergroup relations in society	5	-	paper	no
Boundaries of psychology	5	-	paper	no
Multivariate Models	5	-	exam, paper	yes

4. Modules organised by the Faculty of Arts

Module	ECTS	Entry requirements	Assessment	Practical
Natural language processing	5	-	exam, presentation	no

IV: Courses selected by students.

Upon request of the student, the Board of Examiners can give permission to follow a course that is not mentioned in category I, II or III.

The request procedure must be started at least 4 weeks before the beginning of the course.

The procedure is started as soon as the Board of Examiners receives a letter in which the permission is requested. In this letter, the student must state the relevance of the selected course for their individual curriculum.

The Board of Examiners will decide on an individual basis if permission is granted. The student will be informed in writing about the decision on their permission within 4 weeks.

Appendix E Entry requirements and compulsory order of examinations (art. 3.2)

1. The following list presents the compulsory order of examinations.

Module
Introduction to BCN
Track specific modules
Career related topics
Minor research project
Summer symposium I*
Colloquium: must be presented in the second semester
Optional modules
Essay: must be completed at the end of the fourth semester
Major research project
Summer symposium II*

* Students are required to participate twice in the summer symposium: Once after the minor research project and once after the major research project.

2. Upon request of the student the Board of Examiners can give dispensation of the compulsory order of examinations.

Appendix F Admission requirements (art. 4.1)

1. Students in possession of an admission permit can be admitted to the Degree programme.

2. Students who meet the requirements are provided with an admission permit by the Admissions Board.

3. An admission permit is only valid for the academic year following the academic year in which the permit is granted.

4. There may be other conditions attached to the admission permit. The requirements must be met before the master's degree programme has started.

5. The admission requirements comprise:
- a bachelor's degree affiliated to the behavioural, cognitive and/or neurosciences, this will be judged by the Board of Admissions;
- sufficient knowledge of the English language;
- sufficient knowledge of the relevant sciences;
- a suitable attitude, motivation and talent to follow the master's degree programme.

6. The Board of Examiners establishes an Admissions Board that judges the student's fulfilment of the requirements. This Board consists of four members of the master's degree programme's Board of Examiners.
One of the members is appointed as chairperson.

7. The decisions of the Admissions Board can be appealed to at the 'College van Beroep voor de Examens'.

8. Students apply to the admission procedure by sending in the following documents:
- a completed application form;
- a complete curriculum vitae;
- a document that proves sufficient proficiency in the English language (see 9.);
- a survey of the study results attained in academic courses so far;
- a letter of motivation in which the student states why s/he wants to follow the master's degree programme in particular (including which track) and what his/her expectations and ambitions are;
- (if desired) results of former research projects, like reports or articles;
- the names of two scientists willing to provide personal information on the applicant;
- (if desired) other documents that the student thinks useful in furthering his/her application.

International students (these are students with a non-Dutch Bachelor degree) need to submit their application via the online application system of the University of Groningen to the Admissions Office. The admission deadlines are presented in Appendix G.

Students with a Dutch Bachelor degree need to send their application to the degree programme coordinator. The admission deadlines are presented in Appendix D.

9. Sufficient knowledge of the English language can be proved by
- Cambridge Certificate of Proficiency in English (A, B or C);
- Cambridge Certificate in Advanced English (A, B or C);
- an overall score of 6.0 or higher in the International English Language Testing System (Academic version);
- a score of at least 580 on the paper-based form of the Test of English as a Foreign Language;
- a score of at least 237 on the computer-based form of the Test of English as a Foreign Language.
- an original certificate of the test, not older than two years, needs to be sent in.
- a Dutch VWO diploma with a score of 6.0 or higher on English.
- the Admissions Board may accept other proofs of knowledge of the English language that guarantee a comparable level of knowledge of English.

10. The applicants will be informed in writing about the decision on their admission within 4 weeks after the deadline for submission. This may be a tentative decision, conditional on further information to be supplied by the candidate.

Appendix G Application deadlines for admission (art. 4.5.1)

Deadline of Application	Non EEA students	EEA students
Behavioural and Cognitive Neurosciences	April 1st 2014	May 1st 2014

Decision deadlines (art. 4.5.3)

Deadline of Decision	Non-EU students	EU students
Behavioural and Cognitive Neurosciences	June 1st 2014	June 1st 2014