# Appendices Teaching and Examination Regulations Master's Degree Programme

# Behavioural and Cognitive Neurosciences

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

The general purpose of the masters program is reflected in the following list of qualifications to be achieved by the graduates of the program.

| **Learning outcomes of the BCN research Master program** | **Dublin descriptors** |
|---|---|
| *Students have obtained*<br>a. a broad overview of important contemporary issues in the area of behaviour, cognition, and neurosciences.<br>b. specialized knowledge in one of the three subfields of behaviour, cognition or neurosciences.<br>c. understanding of the need for multidisciplinary approaches, appreciation of the complexity of the brain.<br>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.<br>e. experience with modern techniques and research approaches.<br>f. knowledge of experimental designs and statistical models.<br>g. a positive critical attitude in the evaluation of scientific results, views and concepts. | **Knowledge and Understanding**<br>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. |
| *Students have obtained*<br>h. specialized knowledge in one of the three subfields of behaviour, cognition or neurosciences.<br>i. understanding of the need for multidisciplinary approaches, appreciation of the complexity of the brain.<br>j. 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.<br>k. experience with modern techniques and research approaches.<br>l. knowledge of experimental designs and statistical models.<br>m. a positive critical attitude in the evaluation of scientific results, views and concepts | **Applying knowledge and understanding**<br>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. |

| | |
|---|---|
| *Students have demonstrated the ability*<br>n. to conduct scientific research, taking into account the limitations of the information and scientific problems in behavior, cognition and neuroscience.<br>o. to obtain an overview of the core issues in a scientific area in a short period of time<br>p. to reflect on the social and ethical responsibilities linked to the application of their knowledge and judgements. | **Applying knowledge and understanding**<br>Students can apply their knowledge and judgments. |
| *Students have demonstrated the ability*<br>q. to present scientific research, taking into account the limitations of their conclusions. | **Communication**<br>Students can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously. |
| *Students have demonstrated*<br>r. the skills required for further study in a largely self-directed or autonomous manner<br>s. to have a realistic time management.<br>t. to recognize the need for, and an ability to engage in ongoing learning.<br>u. to have an understanding of the requirements for a successful scientific career and the ability to judge whether he/she fulfils these requirements.<br>v. to have acquired a general work orientation that is required for membership in a research team, contributing to collective goods, time management, and participation in a research network. | **Learning skills**<br>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 degree programme (art. 2.2)

The programme comprises three tracks of which one is followed by the student.
- Animal and Human Behaviour
- Cognitive Neuroscience and Cognitive Modelling
- Molecular and Clinical Neurosciences

# Appendix C Content of the degree programme (art. 2.3)

The degree programme consists of:

## 1. Overall Programme

| Module | ECTS | entry requirements | assessment | practical |
|---|---|---|---|---|
| Introduction to the Behavioural and Cognitive Neuroscience | 4 | - | lectures, assignments | yes |
| Track specific modules | 20 | - | see 2 | see 2 |
| Integrative Themes | 3 | | lectures, assignments | no |
| Minor thesis | 29 | - | technical and/or laboratory skills, written report, oral presentation | Yes |
| Colloquium | 3 | - | oral presentation | No |
| Minor symposium | 1 | | oral presentation | No |
| Track specific module, other track* | 5 | - | see 2 | see 2 |
| Optional modules** | 10 | ** | ** | ** |
| Essay | 4 | - | | |
| Major thesis | 40 | Minor thesis | technical and/or laboratory skills, written report, oral presentation | yes |
| Major Symposium | 1 | Major thesis | oral presentation | no |

*. Students in the second year choose a minimum of one track specific module that belongs to one of the other two tracks, i.e. the track that they have not chosen in the first year.

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

## 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 | yes |
| The neuroendocrine basis of behaviour | 5 | - | paper, assignment | yes |
| Individuality of behaviour | 5 | - | exam, presentation | yes |

### C-track (20 ECTS)

| Module | ECTS | entry requirements | Assessment | practical |
|---|---|---|---|---|
| Models of Cognition | 5 | - | paper, assignment | no |
| Functional Neuroscience | 5 | - | exam, assignment | yes |
| elective module*** | 5 | *** | *** | *** |
| Experimental Designs and Analysis of Variance | 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[1] | Assessment | Practical |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Functional Neuroscience | 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 |
| Learning and Memory | 5 | - | exam, assignment | no |

# 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 degree programme (see appendix C)

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

| Module | ECTS | entry requirements | Assessment | practical |
|---|---|---|---|---|
| Behavioural pharmacology | 5 | - | exam, presentation | no |
| Neuroanatomy | 5 | - | written exam, oral presentation | yes |
| Philosophy of neuroscience | 5 | - | essay | no |
| Psychiatric and neurobiological aspects of affective disorders and autism | 5 | - | exam, assignment | no |

III. BCN approved modules. No approval is needed for selecting these courses as optional course. However, BCN 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 |
|---|---|---|---|---|
| Selforganisation, Cognition and Social Systems | 5 | - | exam, assignment | yes |
| Laboratory Animal Science | 5 | - | exam | yes |
| Language Modelling | 5 | - | assignment, presentation | yes |
| Perception | 5 | - | exam, presentation | yes |
| User Models | 5 | - | assignment, essay | yes |
| Central Nervous System | 5 | - | exam | no |

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 |
| CNS development and disease | 5 | - | exam, assignment | yes |

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

| module | ECTS | entry requirements | Assessment | practical |
|---|---|---|---|---|
| Cognition, Motivation & Emotion | 5 | - | paper | no |
| Experimental Designs and Analysis of Variance | 5 | - | exam | no |
| Boundaries of Psychology | 5 | - | paper | no |
| Repeated Measures | 5 | - | exam, paper | yes |
| Memory & Learning | 5 | - | exam, assignment | no |

4. Modules organised by the the Faculty of Arts

| module | ECTS | entry requirements | Assessment | practical |
|---|---|---|---|---|
| Machine Learning | 5 | - | exam, assignment | yes |
| 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 Course |
| Track specific modules |
| Integrative Themes |
| Minor thesis |
| Colloquium |
| Minor symposium |
| Track specific module, other track and Optional modules |
| Essay |
| Major thesis |
| Major symposium |

2. Upon request of the student the Board of Examiners can dispense with the order of examinations.

# Appendix F Admission to the degree programme and different specializations (art. 4.1.1 + art. 4.2)

**Admission of HBO applicants, as stated in article 4.3, is not applicable to the BCN researchmaster.**

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 Admission 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 Degree programme has started.

5. The admission requirements comprise:
- A university bachelor's degree affiliated to the behavioural, cognitive and/or neurosciences, this will be judged by the Board of Admission;
- sufficient knowledge of the English language;
- sufficient knowledge of the relevant sciences;
- a suitable attitude, motivation and talent to follow the 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 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;
- a survey of the study results attained in academic courses so far;
- a letter in which the student states why s/he wants to follow this Degree programme in particular (including which track), what his/her expectations and ambitions are;
- (if desired) results of former research projects, like reports or articles;

- the names of three scientists willing to provide personal information on the applicant;
- (if desired) other documents that the student thinks useful in furthering his/her application.

These documents are to be sent preferably via the online application system of the University of Groningen to the Admissions Office by February 1 for non-EU students and by post to the degree programme manager by June 1, for EU students preceding the start of the Degree programme.

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-EU students | EU students |
|---|---|---|
| Nanoscience | February 1st 2010 | February 1st 2010 |
| Behavioural and Cognitive Neurosciences | February 1st 2010 | June 1st 2010 |
| Biomolecular Sciences (topprogramme) | February 1st 2010 | April 15th 2010 |
| Evolutionary Biology (topprogramme/EM) | February 1st 2010 | February 1st 2010 |
| Remaining FMNS Masters | April 15th 2010 | June 1st 2010 |

## Decision deadlines (art. 4.5.3)

| Deadline of Decision | Non-EU students | EU students |
|---|---|---|
| Nanoscience | June 1st 2010 | July 1st 2010 |
| Behavioural and Cognitive Neurosciences | June 1st 2010 | July 1st 2010 |
| Biomolecular Sciences (topprogramme) | June 1st 2010 | July 15th 2010 |
| Evolutionary Biology (topprogramme/EM) | June 1st 2010 | June 1st 2010 |
| Remaining FMNS Masters | June 15th 2010 | July 1st 2010 |