

Master's Programme

## Master Specialisation Developmental Psychology

Faculty of Psychology and Neuroscience

### Infancy

#### Full course description

In no other period during our development do our brain and behaviour change so fundamentally and quickly as they do during infancy. This poses particular methodological constraints on the design of experiments and the selection of participants, whose ages are typically expressed in weeks. An additional challenge in infancy research is the limitation posed on communication. Questioning and instructions are of no use in infancy research and so there is reliance on indirect measurement methods like habituation paradigms or brain imaging methods. Nevertheless, many fascinating findings have emerged in recent years concerning often unexpected cognitive capacities of infants.

The course commences by addressing specific problems in infancy research and covers the methods used to meet or resolve these problems. Next, biological and behavioural aspects of pre- and postnatal development are discussed, in particular concerning their consequences for later cognitive development. The study of object recognition and object permanence is shown to play a fundamental role in cognitive development during infancy. Individual differences and critical periods are illustrated by a number of developmental disorders. Finally, the early development of social cognition and consciousness is addressed.

#### Course objectives

- understand the biological and psychological development from conception to four years of age;
- understand and being able to apply methods and techniques in infancy research like indirect measures as habituation, facial expression, expectancy violation, sucking activity and heart rate changes, but also direct recordings of brain activity (EEG, ERP, MEG) and their hemodynamic correlates (f-MRI, NIRS);
- understanding the periods in prenatal development and the effect of teratogens;
- understanding the early development of processes like visual illusions, face recognition, cortical inhibition, mental representation, language and social cognition;
- understanding the underlying mechanisms in developmental pathologies like Fetal Alcohol Syndrome, prematurity, dyslexia, cerebral palsy, and autism.

PSY4031

Period 1

2 Sep 2019

25 Oct 2019

[Print course description](#)

ECTS credits:

4.0

Instruction language:

English

Coordinator:

- [J.E.A. Stauder](#)

Teaching methods:

Lecture(s), PBL

Assessment methods:

Attendance, Written exam

Keywords:

Critical period, object permanence, face processing, joint attention

Faculty of Psychology and Neuroscience

## **Perception, Attention and Motor Development**

### **Full course description**

Although perception, attention and motor function undergo the most spectacular changes during infancy, development proceeds throughout the course of an individual's entire lifespan. In the course, students will become acquainted with the latest theories and experimental findings related to the development of these functions, with an emphasis on biological and neuropsychological models. Knowledge about the way in which brain development is linked to the development of specific cognitive functions is crucial for determining the constraints of development theories. During the course, it will become evident to students that perception, attention and motor development are closely related to each other. Developmental disorders in perception, attention or motor functions can have divergent consequences, depending on the age at which they start. For instance, being born deaf or of becoming deaf at a later age has different consequences due to taking place in different brain development stages. During the course, a number of common childhood disorders associated with aberrant development of perception, attention or motor functions will be discussed. Also here, the focus is on neuropsychological theories on the origins of these developments. Specific topics are the development of 'bottom-up' versus 'top-down' attention processes and the role of eye-movements, the development of executive functions and frontal cortex, the development of perceptual-motor functions, autism, ADHD, Gilles de la Tourette and possible intervention and rehabilitation methods (both pharmacological as well as cognitive).

### **Course objectives**

Students:

- are able to explain, reproduce and differentiate between different cognitive/neurobiological theories central to the life-span development of visual perception and eye-movements, attention and executive control, motor control and action-perception integration;
- are able to apply this theoretical knowledge to cases of atypical development in perception, attention or motor functioning, such as autism, ADHD and Gilles de la Tourette;
- can describe and discuss theories and research on the aetiology of childhood psychological/psychiatric disorders related to deficits in attention, perception and motor skills like autism, ADHD and Gilles de la Tourette with a focus on the influence of environmental, personal and biological (genetic/psychopharmacological /brain) factors;
- will be able to describe/explain therapies/interventions (cognitive/behavioural or psychopharmacological) and their effectiveness in ADHD/Gilles de la Tourette;

- will be able to better understand, analyse and evaluate research and research methods and paradigms (experimental tasks and neuropsychological/diagnostic instruments) used in the field of the typical and atypical neurocognitive development of perception, attention and motor skills.

PSY4032

Period 1

2 Sep 2019

25 Oct 2019

[Print course description](#)

ECTS credits:

4.0

Instruction language:

English

Coordinator:

- [L.M. Jonkman](#)

Teaching methods:

Lecture(s), PBL

Assessment methods:

Attendance, Written exam

Keywords:

Childhood, adolescence, Attention, visual perception, executive control, motor development, ADHD, Gilles de la Tourette

Faculty of Psychology and Neuroscience

## **Practical Training: Measuring Attention and Executive Functions in Behavioural Paradigms**

### **Full course description**

Students will perform several attention and executive function tasks that are frequently applied in clinical and non-clinical developmental settings. Already gathered data from children will be provided to the students so that they can practice with performing statistical analyses. Each student formulates a research question based on the literature. All research questions will focus on themes within the field of childhood development of attention and executive control and associated disorders such as Autism Spectrum Disorder or ADHD. During the course, students will present and discuss their research questions and findings in both group meetings and in a written report.

### **Course objectives**

Students:

- can read, interpret and reflect upon papers reviewing theories and experimental studies in the field of typical or atypical development of attention and executive function;
- are able to recognize, understand and differentiate between different experimental paradigms and neuropsychological measures to assess cognitive functions (attention and executive functions) in children and adults;
- can formulate a relevant and innovative research question based upon a review of the relevant

## Master Psychology Specialisation Developmental Psychology

literature in the field of study;

- can select the appropriate research design and statistical analyses fitting their research question;
- can apply statistics to developmental data and interpret results;
- can write/report findings in the format of a research paper.

PSY4033

Period 1

2 Sep 2019

25 Oct 2019

[Print course description](#)

ECTS credits:

2.0

Instruction language:

English

Coordinator:

- [L.M. Jonkman](#)

Teaching methods:

Assignment(s), Paper(s), Presentation(s), Research, Skills, Training(s), Work in subgroups

Assessment methods:

Attendance, Final paper

Keywords:

Attention, executive functions, childhood development, experimental psychology, Writing

Faculty of Psychology and Neuroscience

## Practical Training: EEG and ERP

### Full course description

Electroencephalography (EEG) and Event Related Potentials (ERP) offer a combination of precise measurements for the time course of brain processes. These are low cost, non-invasive measurements and are widely available. For these reasons they make a unique contribution to cognitive neuroscience. Scientific interest in EEG and ERP is growing, and results have been increasingly integrated with other neuro-imaging techniques during the last few decades.

Lectures and basic literature provide an introduction for students to the basics of EEG and ERP research, EEG and ERP terminology and the possibilities and limitations of EEG and ERP. For a Midterm paper students study an empirical data article from the literature and answer questions about its EEG and ERP methods and interpretation based on lectures, basic literature and other sources. Students also study practical measurement issues, such as electrode placement and types of artefacts. Finally, students must interpret the resulting data. Successful measurement requires an understanding of the basics of EEG and ERP signal analysis techniques, such as artefact management, spectral analysis, filtering, ERP averaging, time-frequency analysis etc. Students also receive hands-on training in smaller groups in running an ERP experiment, including electrode application, minimising artefacts, and health and safety in the lab. A number of simple experimental paradigms will be used that provide interesting and reliable results. Data processing will include a number of common EEG analyses, e.g. analyses in the time and frequency domain.

## Course objectives

Students are able to understand:

basic EEG/ERP paradigms, EEG recording systems, measurement settings, electrode application, data quality verification, analogue-digital conversion, basic EEG / ERP components, interpreting topographical plots, neural origins of EEG, time domain analysis, frequency domain analysis, time-frequency analysis, filtering, ocular artefact control, muscle artefact control, choice of reference, re-referencing.

PSY4034

Period 1

2 Sep 2019

25 Oct 2019

[Print course description](#)

ECTS credits:

2.0

Instruction language:

English

Coordinator:

- [F.T.Y. Smulders](#)

Teaching methods:

Lecture(s), Paper(s), Skills, Training(s), Work in subgroups

Assessment methods:

Attendance, Final paper

Keywords:

Electroencephalography (EEG), Event-related potentials (ERP), electrophysiology, measurement, analysis of brain potentials

Faculty of Psychology and Neuroscience

## Development of Cognition and Language

### Full course description

In this course typical and atypical childhood development of higher order cognitive functions such as memory, language and reading, number processing and arithmetic will be discussed. These higher order cognitive functions are crucial for daily functioning. Two questions will be central in the study of these topics: which changes take place as a child gets older and how do these changes occur? We will approach the how question by studying both neurobiological and environmental factors influencing typical or atypical development. Especially in the case of the development of highly complex skills such as reading and arithmetic many cascaded processes are involved spanning a long period of time. The study of these processes and their basis in the brain is complex and addresses many methodological issues that will also be discussed in the course. Specific topics dealt with are development of working memory, long-term memory, number representation, arithmetic, word learning, reading, and intelligence. Atypical development of these functions, as for instance in dyslexia and dyscalculia will also be studied.

## Course objectives

At the end of the course students are able to:

- compare and contrast (advantages and disadvantages) the most used brain imaging methods and research designs in developmental research;
- explain the most important brain structural and functional changes in the domain of: working memory development, long-term explicit memory development, language development, development of reading and bilingualism, development of number sense and arithmetic, and development of general intellectual abilities;
- clarify what goes wrong in developmental disorders such as dyslexia and dyscalculia and explain possible interventions.

PSY4035

Period 2

28 Oct 2019

20 Dec 2019

[Print course description](#)

ECTS credits:

4.0

Instruction language:

English

Coordinator:

- [F.C.L. Donkers](#)

Teaching methods:

Lecture(s), PBL

Assessment methods:

Attendance, Written exam

Keywords:

developmental research methods, Cognitive development, brain development, Memory, word-learning, bilingualism, number knowledge, arithmetic, dyslexia, dyscalculia

Faculty of Psychology and Neuroscience

## Social Emotional Development

### Full course description

Emotions are an essential part of our life. In every generation, humans develop the skills to express subtle emotions and learn to recognize and understand emotions, moods and the thoughts of others. They enter into extremely complex social and emotional interactions with other people. This course will discuss scientific studies about how social emotional life develops. Social emotional development will be studied at four levels. Firstly on the genetic level: students will analyze the role of genes in social emotional development through the study of psychopathologies. Examples include the syndrome of Rett and Williams, autism and psychopathy. Secondly is the level of brain mechanisms (e.g. the role of structures like the amygdala in the development of social cognition). Thirdly is the neuropsychological level: How do cognitive functions (as represented in a theory of mind) and emotional expressions (like blushing) develop and how is their development mediated by brain structures? Lastly, is the level of evolutionary psychology: Why have specific developmental patterns been selected during the course of evolution? Since social emotional development is not only of

theoretical interest, the course also deals with practical implications of theories about social emotional development.

## Course objectives

- insight into theories of development, cause and object of emotion;
- genetics;
- laws of Mendel;
- model of Ledoux;
- syndrome of Rett and Williams;
- imitation;
- mirror neurons;
- theory of mind, empathy, instrumental helping;
- altruism;
- theories of moral development, moral emotions;
- autism, extreme male brain;
- temperament;
- aggression, psychopathy.

PSY4036

Period 2

28 Oct 2019

20 Dec 2019

[Print course description](#)

ECTS credits:

4.0

Instruction language:

English

Coordinator:

- [H.E. Smit](#)

Teaching methods:

Lecture(s), PBL

Assessment methods:

Attendance, Written exam

Keywords:

Theory of mind, empathy, moral development, autism, aggression, psychopathy

Faculty of Psychology and Neuroscience

## Practical Training: Psychological Tests

### Full course description

This practical training course is concerned with psychological tests, which are used to assess cognitive development and functioning of children at various ages. More specifically, students will learn basic skills for administering and interpreting mental capacity tests for children and will increase their reflection on these skills. For example, students can gain experience in administering the WISC and SON tests and in interpreting child behaviour using the Bayley Scales of Infant Development (Bayley-III-NL).

## Course objectives

- being able to administer mental capacity tests like the Bayley-III, SON and WISC (testing a child);
- being able to understand and interpret the Bayley-III;
- being able to communicate test findings to a lay person (lawyer).

PSY4037

Period 2

28 Oct 2019

20 Dec 2019

[Print course description](#)

ECTS credits:

2.0

Instruction language:

English

Coordinator:

- [J.E.A. Stauder](#)

Teaching methods:

Assignment(s), Lecture(s), Paper(s), Skills

Assessment methods:

Final paper

Keywords:

Cognitive capacity tests, IQ tests, WISC, WPPSI, SON, Bayley-III

Internships

## Research Internship

Faculty of Psychology and Neuroscience

## Research Proposal

### Full course description

The research proposal is drafted in preparation for the research internship. To ensure a timely process, PSY4074 is done in conjunction with PSY4075, which serves to support the development of the research proposal and subsequent internship via assignments, workshops, and lectures that allow students to practice and develop the following skills:

Conducting literature reviews

- using Endnote;
- choosing a research design;
- selecting appropriate statistical methods;
- managing data and applying statistics;
- writing a research proposal using academic writing;
- providing peer feedback on a research proposal;
- understanding research ethics and applying for approval from the ERCPN;
- planning for future career.

This module is not applicable for students of the Master Neuropsychology that complete a clinical internship.

## Course objectives

- to produce a scientifically sound research proposal;
- to adequately prepare for a research internship.

PSY4074

Year

1 Sep 2019

31 Aug 2020

[Print course description](#)

ECTS credits:

5.0

Instruction language:

English

Coordinator:

- [S. Stutterheim](#)

Teaching methods:

Assignment(s)

Assessment methods:

Final paper

Keywords:

Academic skills, Research skills, methods, statistics, Writing, Internship

Faculty of Psychology and Neuroscience

## Academic Skills

### Full course description

This module offers students an opportunity to practice and apply academic writing and research skills, and prepares students for their research internship. To achieve this, a series of assignments, workshops, and lectures will be scheduled in the 3rd period (four weeks). In addition, students will be encouraged to consider their future career. The following topics and activities will be covered:

- conducting literature reviews;
- using Endnote;
- choosing a research design;
- selecting appropriate statistical methods;
- managing data and applying statistics;
- writing a research proposal using academic writing;
- providing peer feedback on a research proposals;
- understanding research ethics and applying for approval from the ERCPN;
- planning for future career.

This module is not applicable for students of the Master Neuropsychology that complete a clinical internship.

## Course objectives

- students are able to execute a literature review;
- students are able to use Endnote;
- students are able to select a research design and corresponding methods for a research project;
- students understand and apply statistical techniques;
- students can explain characteristics of academic writing and are able to implement and apply that knowledge to the writing of a research proposal;
- students are able to execute a peer review that is both constructive and encouraging;
- students recognize ethical aspects of conducting research and are able to complete an ethics application;
- students are able to produce a research proposal;
- students recognize career perspectives for their future.

PSY4075

Period 3

6 Jan 2020

31 Jan 2020

[Print course description](#)

ECTS credits:

0.0

Instruction language:

English

Coordinator:

- [S. Stutterheim](#)

Teaching methods:

Assignment(s), Skills, Lecture(s)

Assessment methods:

Attendance, Assignment

Keywords:

Academic skills, Research skills, methods, statistics, career skills, Writing, peer reviewing, ethics in research

Faculty of Psychology and Neuroscience

## Research Internship Graded

### Full course description

The second part of the one-year master's program (from period 3 onwards), is devoted to conducting a research internship that involves 1) writing of a research proposal, and preparing and planning of the research project, 2) conducting the research project, and 3) analyzing the results of the research project. This work will result in an individually written 4) master's thesis. Step 1 will be done in period 3, steps 2 to 4 from period 4 onwards.

The internship can be carried out at Maastricht University, at an external research institute or at other, more practically oriented institutions. In all cases, a student's research proposal and master's thesis will be evaluated by two assessors. At least one of these assessors is a staff member at the Faculty of Psychology and Neuroscience (FPN). The other assessor can be an external researcher.

## Master Psychology Specialisation Developmental Psychology

One of the assessors must hold a PhD, the other can be a PhD candidate.

Information about research internships offered by faculty members can be found on AskPsy > Curriculum > internships/ stages.

Each specialisation has its own internship coordinator:

Legal Psychology: Kim van Oorsouw

Phone (043) 38 84050, 40 Universiteitssingel East, Room 3.767,

Email: k.vanoorsouw@maastrichtuniversity.nl

Health and Social Psychology: Ghislaine Schyns

Phone (043) 38 84523, 40 Universiteitssingel East, Room 4.777a,

Email: ghislaine.schyns@maastrichtuniversity.nl

Work and Social Psychology: Robert van Doorn

Phone (043) 38 81926, 40 Universiteitssingel East, Room 4.765,

Email: r.vandoorn@maastrichtuniversity.nl

Developmental Psychology: Hans Stauder

Phone (043) 38 81933, 55 Oxfordlaan, Room 2.009,

Email: h.stauder@maastrichtuniversity.nl

Cognitive Neuroscience: Amanda Kaas

Phone (043) 38 82172, 55 Oxfordlaan, Room 2.019,

Email: a.kaas@maastrichtuniversity.nl

Neuropsychology:

Research internships: Romain Hollands

Phone (043) 38 83421

Clinical internships: Ieke Winkens

Master Psychology Specialisation Developmental Psychology

Phone: (043) 38 84512,

Location: Universiteitssingel 40, East

Email: [fpn-np-internship@maastrichtuniversity.nl](mailto:fpn-np-internship@maastrichtuniversity.nl)

This module is not applicable for students of the Master Neuropsychology that attend a clinical internship.

## Course objectives

Students are able to understand:

- conducting a supervised empirical research project and summarising this research in a master's thesis.

## Prerequisites

The Research Internship can only be started when at least 8 credits of the compulsory core courses have been obtained of the modules offered in periods 1 and 2. Furthermore, academic research skills (4075) must be submitted and the research proposal must be assessed as sufficient by both assessors and must be ethically approved before the start. In addition:

- certain Research Internships may require that practical or skills training(s) have been completed.

PSY4078

Year

1 Sep 2019

31 Aug 2020

[Print course description](#)

ECTS credits:

10.0

Instruction language:

English

Coordinator:

- [G.C. Kraag](#)

Teaching methods:

Assignment(s), Paper(s), Research, Skills, Working visit(s)

Assessment methods:

Attendance, Final paper, Observation, Participation

Keywords:

Academic skills, internship, research, Research proposal, master's thesis

Faculty of Psychology and Neuroscience

## Research Internship Ungraded

### Full course description

The second part of the one-year master's program (from period 3 onwards), is devoted to conducting a research internship that involves 1) writing of a research proposal, and preparing and planning of the research project, 2) conducting the research project, and 3) analyzing the results of the research project. This work will result in an individually written 4) master's thesis. Step 1 will be done in period 3, steps 2 to 4 from period 4 onwards.

The internship can be carried out at Maastricht University, at an external research institute or at other, more practically oriented institutions. In all cases, a student's research proposal and master's thesis will be evaluated by two assessors. At least one of these assessors is a staff member at the Faculty of Psychology and Neuroscience (FPN). The other assessor can be an external researcher. One of the assessors must hold a PhD, the other can be a PhD candidate.

Information about research internships offered by faculty members can be found on AskPsy > Curriculum > internships/ stages.

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Email: r.vandoorn@maastrichtuniversity.nl

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Cognitive Neuroscience: Amanda Kaas

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Email: a.kaas@maastrichtuniversity.nl

Neuropsychology:

Research internships: Romain Hollands

Phone (043) 38 83421

Clinical internships: Ieke Winkens

Phone: (043) 38 84512,

Location: Universiteitssingel 40, East

Email: fpn-np-internship@maastrichtuniversity.nl

This module is not applicable for students of the Master Neuropsychology that attend a clinical internship.

## Course objectives

Students are able to understand:

- conducting a supervised empirical research project and summarising this research in a master's thesis.

## Prerequisites

The Research Internship can only be started when at least 8 credits of the compulsory core courses have been obtained of the modules offered in periods 1 and 2. Furthermore, academic research skills (4075) must be submitted and the research proposal must be assessed as sufficient by both assessors and must be ethically approved before the start. In addition:

- certain Research Internships may require that practical or skills training(s) have been completed.

PSY4079

Year

1 Sep 2019

31 Aug 2020

[Print course description](#)

ECTS credits:

15.0

Master Psychology Specialisation Developmental Psychology

Instruction language:

English

Coordinator:

- [G.C. Kraag](#)

Teaching methods:

Assignment(s), Paper(s), Research, Skills, Working visit(s)

Assessment methods:

Attendance, Final paper, Observation, Participation

Keywords:

Academic skills, internship, research, Research proposal, master's thesis

Thesis

## Master's Thesis

Faculty of Psychology and Neuroscience

## Master's Thesis

### Full course description

The second part of the one-year master's program (from period 3 onwards), is devoted to conducting a research internship that involves 1) writing of a research proposal, and preparing and planning of the research project, 2) conducting the research project, and 3) analyzing the results of the research project. This work will result in an individually written 4) master's thesis. Step 1 will be done in period 3, steps 2 to 4 from period 4 onwards.

The internship can be carried out at Maastricht University, at an external research institute or at other, more practically oriented institutions. In all cases, a student's research proposal and master's thesis will be evaluated by two assessors. At least one of these assessors is a staff member at the Faculty of Psychology and Neuroscience (FPN). The other assessor can be an external researcher. One of the assessors must hold a PhD, the other can be a PhD candidate.

Information about research internships offered by faculty members can be found on AskPsy > Curriculum > internships/ stages.

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Email: [k.vanoorsouw@maastrichtuniversity.nl](mailto:k.vanoorsouw@maastrichtuniversity.nl)

Health and Social Psychology: Ghislaine Schyns

Phone (043) 38 84523, 40 Universiteitssingel East, Room 4.777a,

Master Psychology Specialisation Developmental Psychology

Email: ghislaine.schyns@maastrichtuniversity.nl

Work and Social Psychology: Robert van Doorn

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Email: r.vandoorn@maastrichtuniversity.nl

Developmental Psychology: Hans Stauder

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Email: h.stauder@maastrichtuniversity.nl

Cognitive Neuroscience: Amanda Kaas

Phone (043) 38 82172, 55 Oxfordlaan, Room 2.019,

Email: a.kaas@maastrichtuniversity.nl

Neuropsychology:

Research internships: Romain Hollands

Phone (043) 38 83421

Clinical internships: Ieke Winkens

Phone: (043) 38 84512,

Location: Universiteitssingel 40, East

Email: fpn-np-internship@maastrichtuniversity.nl

This module is not applicable for students of the Master Neuropsychology that attend a clinical internship.

## **Course objectives**

Students are able to understand:

- conducting a supervised empirical research project and summarising this research in a master's thesis.

## Prerequisites

The Research Internship can only be started when at least 8 credits of the compulsory core courses have been obtained of the modules offered in periods 1 and 2. Furthermore, academic research skills (4075) must be submitted and the research proposal must be assessed as sufficient by both assessors and must be ethically approved before the start. In addition:

- certain Research Internships may require that practical or skills training(s) have been completed.

PSY4091

Year

1 Sep 2019

31 Aug 2020

[Print course description](#)

ECTS credits:

10.0

Instruction language:

English

Coordinator:

- [G.C. Kraag](#)

Teaching methods:

Assignment(s), Paper(s), Research, Skills, Working visit(s)

Assessment methods:

Attendance, Final paper, Observation, Participation

Keywords:

Academic skills, Internship, Research, Research proposal, master's thesis