

Master Neurosciences



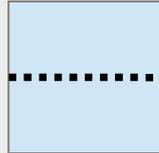
FNWI Master Neurosciences

18 EC



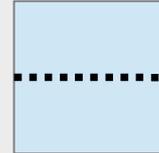
MNS (new)

24 EC



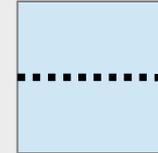
PPP

24 EC



BAN

24 EC



CN2

~36 EC

Internship 1

Extra (optional) courses/parts

~54 EC

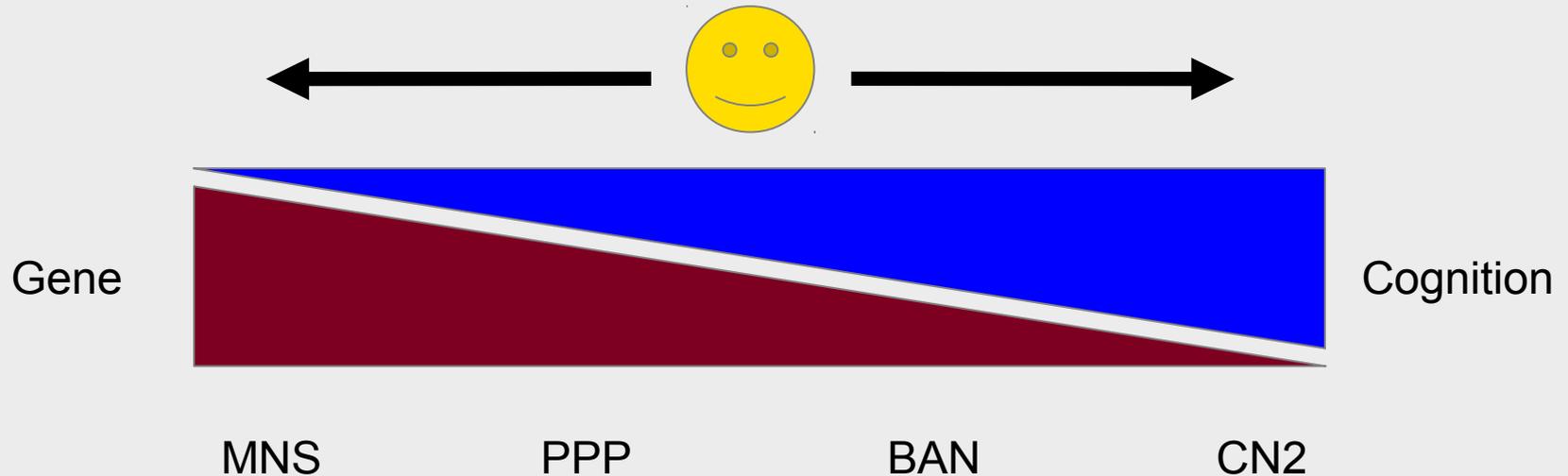
Internship 2

12 EC Master thesis

Time (120 EC)



Which track has your preference ?



Coverage of all Neuroscience

These tracks are secured by excellent research groups
Real research masters !!



MNS: Molecular Neurosciences/ neurodevelopment

The goals of the track are to:

Provide an essential theoretical framework in molecular neurosciences;

Prepare the student to be a critical researcher;

Prepare the student to work independently in a molecular neuroscience lab;

Prepare the student to report on his/her results in written and spoken form;

Train the student in the research process:

research question> design experiment> interpret results> define following research question(s);

Train the student in applying for research funding.

The track starts with a mandatory course of three months covering several topics:

- 1) Development and specification of neuronal systems;
- 2) Signaling pathways in neuronal systems;
- 3) Stem-cell fate and cortical genesis.

***** 4 weeks high level practical work*****



PPP: Psychopharmacology and Pathophysiology

The main goal of the P&P track is to provide students with a detailed and up-to-date insight into:

- 1) the neurobiological substrate and etiology of some of the main human brain disorders,
- 2) the current pharmaca available and their mechanism of action,
- 3) how does the research to develop, and test new drugs takes place starting from basic research in animal models, and how is this organized in the setting of a pharmaceutical company.

The P&P track starts with a specialized course Advanced Psychopathology (12 EC) followed by an optional course in Experimental Neurobiology of Disease (12 EC)





BAN: Basic and applied neuroscience.

The track in Basic and applied neuroscience focuses on complex questions such as:

How do neurons produce their specialized firing patterns?

What is the information processing role of astrocytes, e.g. neuron-glia interactions?

How do genes encode development and can we regenerate neuronal circuits?

The track will introduce you to several modern research techniques. There will be hands-on computer practicals and a lab rotation to prepare you for a later research project period.

Advanced Neuroscience course:

Specific focus on neurophysiology and cellular neuroscience.

Capita Selecta from Basic and Applied Neuroscience course:

Update your neurogenetics, neuro anatomy and learn more about the principles of neuron-glia interactions.



CN2: Cognitive Neurobiology & Clinical Neurophysiology

The core goal of this Master track can be captured by these questions:

How does the brain mediate cognitive processes?

How can we measure and quantify this?

How can we utilize this knowledge to help people with brain disorders and cognitive impairments?

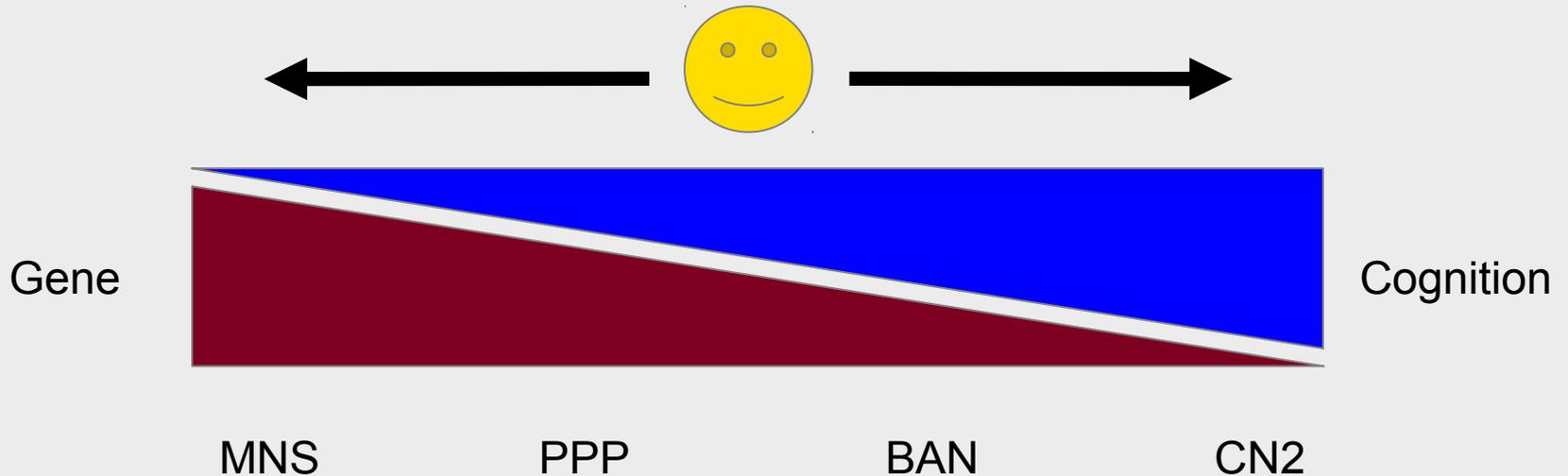
This track starts off with the course:

Advanced Cognitive Neurobiology and Introduction to Clinical Neurophysiology
bringing you up to speed on the main themes and methods in these fields.

This course is followed by a more specialized, in-depth course:

Special topics, Techniques and Analysis in Cognitive and Clinical Neurophysiology

Choose the track of your preference



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Important links:

Uva website containing the info discussed here:

<http://www.uva.nl/en/education/master-s/master-s-programmes/item/neurobiology.html>

(please follow the specific links to the respective tracks.

Group info correlated to the specific tracks:

<http://sils.uva.nl/research/research-programmes/neuro-sciences.html>

(please follow the specific links to the respective research groups

Within neurosciences).

Track coordinators (research group leaders) websites:

Prof. dr. Marten Smidt: <http://www.uva.nl/over-de-uva/organisatie/medewerkers/content/s/m/m.p.smidt/m.p.smidt.html>

Prof. dr. Cyriel Pennartz: <http://www.sils-cns.nl/GenPennartz.html>

Prof. dr. Paul Lucassen: <http://www.uva.nl/over-de-uva/organisatie/medewerkers/content/l/u/p.j.lucassen/p.j.lucassen.html>

Prof. dr. Wytse Wadman: <http://www.sils-cns.nl/GenWadman.html>

