



This Master programme provides a unique **interdisciplinary** and **integrated training approach** that covers **all major topics of brain research**, from normal brain functions to brain disorders.

At the **interface between psychology and biology**, this programme will provides you with both **theoretical background** and **practical experience in research**.

[www.umons.ac.be/masterneurosciences](http://www.umons.ac.be/masterneurosciences)

**Information et conditions d'accès :**

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**UMONS**  
Université de Mons

  
Faculté  
de Médecine  
et de Pharmacie



► **NOUVEAU À L'UMONS**

**MASTER IN  
BIOMEDICINE  
NEUROSCIENCE**

- **Master 120 crédits**
- **En anglais**
- **Dédiacé au cerveau**

## JOB OPPORTUNITIES

- Scientific careers in academic or industrial environment
- Pharmaceutical, food, and medical technology industries
- Pharmaceutical drug discovery & development (Ageing population (AD, PD, Diabetes, Stroke, Brain tumors; Obesity (nutrition); Migraine; Addiction...)
- Scientific research and policy functions in research institutes
- Somatic and mental health treatment institutions
- Forensic institutes
- Centres for educational research and counselling
- Insurance providers
- Regional and national government
- Behavioural economics or decision neuroscience
- Consulting, public policy
- Sport medicine and re-education
- Military domain

This specialisation covers the field of Neuroscience from brain cells to cognition, using knowledge from different neuroscience disciplines, such as molecular biology and behavioral testing, to study how the brain functions.

The programme help to understand the mechanisms that underlie psychological processes, as well as psychiatric and neurological disorders, and will provide you with the laboratory skills and the competencies needed to conduct fundamental and preclinical research into these disorders and mechanisms.

## PROGRAMME DES COURS

### BIOMEDICALNEUROSCIENCE (24 ECTS)

- ▶ Brain plasticity (10h + 20h, Q1, 4 ECTS)
- ▶ Research techniques in Neuroscience (45h, Q1, 6 ECTS)
- ▶ Neuropharmacology (30h, Q1, 4 ECTS)
- ▶ Neurotoxicology and Safety Pharmacology (30h, 4 ECTS)
- ▶ Integrative biomedicine (45h, Q1, 6 ECTS)
  - Brain and immunology
  - Brain-gut axis
  - Neuroendocrine system
  - Neurovascular unit and BBB

### HUMAN NEUROSCIENCE (16 ECTS)

- ▶ Clinical and Psychological Neuroscience: group coworking (8 ECTS)
  - Experimental Design and Biostatistics
  - Modelisation and interpretation
  - Signal analysis
- ▶ Neuroscience in Society (8 ECTS)
  - Social Neuroscience / Team Management
  - Neuro-economics / Law and Neuroscience
  - Neuro-education
  - Human-machine interaction / Artificial Intelligence
  - The burden of brain diseases and the health system

### TRANSVERSAL COMPETENCIES (20 ECTS)

- ▶ GMP/GLP (15h, Q1, 2 ECTS)
- ▶ Interdisciplinary Program in Healthcare Innovation (5 ECTS)
- ▶ Intellectual Property (2 ECTS)
- ▶ Sensibilisation to Innovation Project (3 ECTS)
- ▶ Certificate in animal experimentation (8 ECTS)

### PRACTICALWORK(60 ECTS)

- ▶ Experimental work in a neuroscience laboratory: 3 months (10 ECTS)
- ▶ Scientific redaction and communication (10 ECTS)
- ▶ Master thesis (19 ECTS)
- ▶ External training (21 ECTS)

## ACTIVITÉS DE RECHERCHE

The interdisciplinary Center for Psychophysiology and Electrophysiology of Cognition

This Research center combines the expertise of Engineers, Psychologists and Biomedical experts

The Health Research Institute of UMONS

This institute regroups 22 laboratories and 100 researchers  
[www.umons.ac.be/sante](http://www.umons.ac.be/sante)

Erasmus Exchange Program

An Erasmus exchange programme will be organized with the University of Milano  
<http://www.unimi.it/ENG/courses/K03.htm>

