# M.Sc. Integrative Neuroscience in Magdeburg, Germany

First part (Basic subjects)
Semester 1
You must take 30 CP total: 28 CP core courses (PF) plus 2 CP of 6 CP electives (WPF). An additional 2 CP are offered optionally.

1 SEMESTER

| Modul GA1 | Modul GB | Modul GC | Modul X |
|---|---|---|---|
| Molecular and Cellular Neuroscience | Systems and Behavioural Neuroscience | Theoretical and Computational Neuroscience | Professionalism |
| 9 CP (PF) + 2 CP (WPF) | 9 CP (PF) | 6 CP (PF) + 4 CP (WPF) | 4 CP (PF) + 2 CP (WPF) |
| **Cellular Neurophysiology**<br>Lecture: 4 SWS / 4 CP<br>Lab: 2 SWS / 2 CP | **Integr. & Compar. Neuroanatomy**<br>Lecture: 4 SWS / 4 CP<br>Lab: 2 SWS / 2 CP | **Theoretical Neuroscience I**<br>Lecture: 3 SWS / 3 CP<br>Tutorial (WPF): 2 SWS / 2 CP | **Lab Rotation I**<br>Lab: 1,25 SWS / 4 CP |
| **Basic Molecular & Cell Biology**<br>Lecture: 3 SWS / 3 CP<br>Seminar (WPF): 2 SWS / 2 CP | **Neuroethology**<br>Lecture: 3 SWS / 3 CP | **Mathematical foundations**<br>Lecture: 3 SWS / 3 CP<br>Tutorial (WPF): 2 SWS / 2 CP | **Journal Club**<br>Journal Club (optnl.) 2 SWS / 2 CP |

First part (Basic subjects)
Semester 2
You must take 30 CP: 28 CP core courses (PF) plus 2 CP of 6 CP electives (WPF). An additional 2 CP are offered optionally.

2 SEMESTER

| Modul GA2 | Modul GB | Modul GC | Modul X |
|---|---|---|---|
| Molecular and Cellular Neuroscience | Systems and Behavioural Neuroscience | Theoretical and Computational Neuroscience | Professionalism |
| 12 CP (PF) | 6 CP (PF) + 2 CP (WPF) | 6 CP (PF) + 4 CP (WPF) | 4 CP (PF) + 2 CP (WPF) |
| **Molecular & Cellular Neurobiology**<br>Lecture: 4 SWS / 4 CP<br>Lab: 2 SWS / 2 CP | **Systems Neurophysiology**<br>Lecture: 3 SWS / 3 CP<br>Lab (WPF): 2 SWS / 2 CP | **Theoretical Neuroscience II**<br>Lecture: 3 SWS / 3 CP<br>Seminar (WPF): 2 SWS / 2 CP | **Lab Rotation II**<br>Lab: 1,25 SWS / 4 CP |
| **Development & Plasticity**<br>Lecture: 4 SWS / 4 CP<br>Seminar: 2 SWS / 2 CP | **Learning & Memory**<br>Lecture: 3 SWS / 3 CP | **Biological Statistics**<br>Lecture: 3 SWS / 3 CP<br>Seminar (WPF): 2 SWS / 2 CP | **Journal Club**<br>Seminar (optnl.): 2 SWS / 2 CP |

Second part (Advanced subjects)
Semester 3
You must take 30 CP: 24 CP of 36 CP electives (WPF) plus 6 CP core courses (PF). An additional 2 CP are offered optionally.

3 SEMESTER

| Modul VA | Modul VB | Modul VC | Modul VD | Modul X |
|---|---|---|---|---|
| Molecular and Cellular Neuroscience | Systems and Behavioural Neuroscience | Theoretical and Computational Neuroscience | Clinical and Applied Neuroscience | Professionalism |
| 12 CP (WPF) | 12 CP (WPF) | 4 CP (WPF) | 8 CP (WPF) | 6 CP (PF) + 2 CP (WF) |
| **Neurogenetics**<br>Lecture (WPF): 2 SWS / 3 CP<br>Lab (WPF): 1 SWS / 1 CP | **Cognitive Neurobiology**<br>Lecture (WPF): 3 SWS / 4 CP | **Spiking Networks**<br>Lecture (WPF): 2 SWS / 3 CP<br>Lab (WPF): 1 SWS / 1 CP | **Clinical Neuroscience**<br>Lecture (WPF): 3 SWS / 4 CP | **Scientific Ethics**<br>Lecture (PF): 2 SWS / 2 CP |
| **Neuroimmunology, -endocrinology**<br>Lecture (WPF): 2 SWS / 3 CP<br>Lab (WPF): 1 SWS / 1 CP | **Macroimaging**<br>Lecture (WPF): 2 SWS / 3 CP<br>Lab (WPF): 1 SWS / 1 CP | | **Behavioural Pharmacology**<br>Lecture (WPF): 3 SWS / 4 CP | **Lab Rotation III**<br>Lab (PF): 1,25 SWS / 4 CP |
| **Neural Signalling**<br>Lecture (WPF): 2 SWS / 3 CP<br>Lab (WPF): 1 SWS / 1 CP | **Microimaging**<br>Lecture (WPF): 2 SWS / 3 CP<br>Lab (WPF): 1 SWS / 1 CP | | | **Journal Club**<br>Seminar (optnl.) 2 SWS / 2 CP |

Third part (Thesis research)
Semester 4
You must take 30 CP cor courses (PF). An additional 2 CP are offered optionally.

4 SEMESTER

**Masterarbeit 28 CP**

**Modul X**
Professionalism
30 CP (PF) + 2 CP (WF)

**Scientific Writing**
Lecture (PF): 2 SWS / 2 CP

**Journal Club**
Seminar (optnl.): 2 SWS / 2 CP

Legend: CP = Credits, SWS = hours per semester week, PF = core course, WPF = elective course, WF = optional subject